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UNITED STATES DISTRICT COURT
DISTRICT OF OREGON
PORTLAND DIVISION

MENTOR GRAPHICS CORPORATION,
an Oregon corporation,

Plaintiff and Counter-Defendant,

v.

EVE-USA, INC., a Delaware corporation, and
SYNOPSYS EMULATION AND
VERIFICATION S.A., formed under the laws
of France,

Defendants and Counter-Plaintiffs.

SYNOPSYS, INC., a Delaware corporation,
EVE-USA, INC., a Delaware corporation, and
SYNOPSYS EMULATION AND
VERIFICATION S.A., formed under the laws
of France,

Plaintiffs and Counter-Defendants,

v.

MENTOR GRAPHICS CORPORATION,
an Oregon corporation,

Defendant and Counter-Plaintiff.

Civil Action No. 3:10-CV-954-MO (LEAD)
Civil Action No. 3:12-CV-1500-MO
Civil Action No. 3:13-CV-579-MO

**MENTOR GRAPHICS' AND
SYNOPSYS' PROPOSED JURY
INSTRUCTIONS**

Pursuant to the Court's April 29, 2014 Amended Trial Management Order (Docket No. 508), July 21, 2014 Scheduling Order (Docket No. 578), and August 20, 2014 Order Granting Motion for Extension of Time (Docket No. 591), Mentor Graphics Corporation ("Mentor Graphics") and Synopsys, Inc., EVE-USA, Inc., and Synopsys Emulation and Verification Engineering, S.A. (collectively, "Synopsys") jointly submit their proposed jury instructions. The parties exchanged proposed jury instructions and met and conferred about the proposed jury instructions, but were not able to reach an agreement on certain instructions. The parties, thus, are submitting separate proposals for certain jury instructions with disputed language is in bold. Each party's objections to the opposing party's instructions and explanation of their proposed instruction is set forth beneath their proposed jury instruction.

In accordance with Local Rule 11-1(d)(2), Synopsys's counsel stipulates to its signature on this joint submission.

Dated: August 21, 2014

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UNITED STATES DISTRICT COURT
DISTRICT OF OREGON
PORTLAND DIVISION

MENTOR GRAPHICS CORPORATION,
an Oregon corporation,

Plaintiff and Counter-Defendant,

v.

EVE-USA, INC., a Delaware corporation, and
SYNOPSYS EMULATION AND
VERIFICATION S.A., formed under the laws
of France,

Defendants and Counter-Plaintiffs.

SYNOPSYS, INC., a Delaware corporation,
EVE-USA, INC., a Delaware corporation, and
SYNOPSYS EMULATION AND
VERIFICATION S.A., formed under the laws
of France,

Plaintiffs and Counter-Defendants,

v.

MENTOR GRAPHICS CORPORATION,
an Oregon corporation,

Defendant and Counter-Plaintiff.

Civil Action No. 3:10-CV-954-MO (LEAD)

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**MENTOR GRAPHICS' AND
SYNOPSYS' PROPOSED JURY
INSTRUCTIONS**

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I. PRELIMINARY INSTRUCTIONS

A. THE PATENT PROCESS: AN OVERVIEW FOR JURORS

The parties agree to play the Federal Judicial Center's video titled "The Patent Process: An Overview for Jurors," available at:

<https://www.youtube.com/watch?v=ax7QHQTbKQE&feature=c4-overview&list=UUIcgGfaeUGYJS07bLeUr1hw>

. The parties also agreed to provide jurors a copy of the sample patent discussed in the video and available at:

[http://www.fjc.gov/public/pdf.nsf/lookup/PatentSystemSample2.pdf/\\$file/PatentSystemSample2.pdf](http://www.fjc.gov/public/pdf.nsf/lookup/PatentSystemSample2.pdf/$file/PatentSystemSample2.pdf)

Source: Federal Judicial Center, available at

http://www.fjc.gov/public/home.nsf/autoframe?openform&url_r=pages/557 (last accessed August 12, 2014).

B. CLAIMS AND DEFENSES

1. Mentor Graphics' Proposed Instruction

To help you follow the evidence, I will give you a brief review of the parties in this action and their positions:

This is an action for patent infringement. The patentee is Mentor Graphics Corporation, which I will refer to as "Mentor Graphics." The parties accused of infringement are Synopsys, Inc., EVE-USA, Inc., and Synopsys Emulation and Verification S.A. I will generally refer to the defendants collectively as "Synopsys." At times I may use the name EVE to refer to EVE-USA, Inc. and Synopsys Emulation and Verification S.A. separately from Synopsys, Inc. Both Mentor Graphics and Synopsys sell emulation systems for testing the circuit designs of semiconductor chips.

Mentor Graphics is the owner of U.S. Patent No. 6,240,376. I may refer to this patent as "the '376 patent," "the Mentor Graphics patent," "the asserted patent," or "the patent-in-suit."

The '376 patent was filed on July 31, 1998, and granted by the PTO on May 29, 2001. The '376 patent lists Alain Raynaud and Luc Burgun as the inventors. The validity and enforceability of the '376 patent is not at issue in this trial. For purposes of this trial, you should assume that the '376 patent is valid and enforceable.

Mentor Graphics contends that certain of Synopsys' emulation systems infringe claims 1, 24, 26, 27, and 28 of the Mentor Graphics patent. These claims may be referred to collectively as the "asserted claims." The emulation systems at issue are ZeBu-Server, ZeBu-Server 2, ZeBu-Server 3, and ZeBu-Blade. These products may be referred to collectively as the "accused products," the "accused emulation systems," or "Synopsys' emulation systems."

Mentor Graphics also contends that Synopsys has actively induced infringement of the asserted claims by others and/or contributed to the infringement of the asserted claims by others.

Synopsys denies that it infringes, directly or indirectly, any of Mentor Graphics' asserted claims.

You will be asked to determine the issue of infringement according to instructions I will give.

Source: Ninth Circuit Model Jury Instruction 1.2 (as revised); Federal Circuit Model Jury Instruction A.2 (as revised).

Mentor Graphics' Objection and Brief Analysis – “Claims and Defenses” Instruction

Mentor Graphics objects to Synopsys' discussion of the “features” of Synopsys' emulation systems, namely the “flexible probes and value change probes,” as unnecessary and prejudicial.

By referring to the accused “features,” Synopsys implies that parts of the emulation system that are not accused do not infringe the '376 patent. That is not the case. Mentor Graphics accuses Synopsys' entire emulation systems of infringing the '376 patent under 35 U.S.C. § 271. The patent statute is directed toward the “patented invention” that is made, used, offered for sale, sold in the United States, or imported into the United States, or the “material or apparatus” that is used to practice the patented process—in this case, Synopsys' emulation systems. 35 U.S.C. § 271(a), (c). The flexible probes or value change probes feature of Synopsys' emulation systems are the accused components, but the entire emulation system infringes the '376 Patent. Synopsys' emphasis on the accused features rather than the accused products is inconsistent with the patent statute and an improper attempt to minimize the alleged infringement and reduce the potential damages award.

2. Synopsys' Proposed Instruction

To help you follow the evidence, I will give you a brief review of the parties in this action and their positions:

This is an action for patent infringement. The patentee is Mentor Graphics Corporation, which I will refer to as "Mentor Graphics." The parties accused of infringement are Synopsys, Inc., EVE-USA, Inc., and Synopsys Emulation and Verification S.A. I will generally refer to the defendants collectively as "Synopsys." At time I may use the name EVE to refer to EVE-USA, Inc. and Synopsys Emulation and Verification S.A. separately from Synopsys, Inc. Both Mentor Graphics and Synopsys sell emulation systems for testing the circuit designs of semiconductor chips.

Mentor Graphics is the owner of U.S. Patent No. 6,240,376. I may refer to this patent as "the '376 patent," "the Mentor Graphics patent," "the asserted patent," or "the patent-in-suit."

The '376 patent was filed on July 31, 1998, and granted by the PTO on May 29, 2001. The '376 patent lists Alain Raynaud and Luc Burgun as the inventors. The validity and enforceability of the '376 patent is not at issue in this trial. For purposes of this trial, you should assume that the '376 patent is valid and enforceable.

Mentor Graphics contends that certain **features of** Synopsys' emulation systems infringe claims 1, 24, 26, 27, and 28 of the '376 patent. These claims may be referred to collectively as the "asserted claims." The emulation systems at issue are ZeBu-Server, ZeBu-Server 2, ZeBu-Server 3, and ZeBu-Blade. **The features of those systems that are at issue are flexible probes and value change probes.** These products are generally referred to as the "accused products."

Mentor Graphics also contends that Synopsys has actively induced infringement of the asserted claims by others and/or contributed to the infringement of the asserted claims by others.

Synopsys denies that it infringes, directly or indirectly, any of Mentor Graphics' asserted claims.

You will be asked to determine the issue of infringement according to instructions I will give.

Source: Ninth Circuit Model Jury Instruction 1.2 (as revised); Federal Circuit Model Jury Instruction A.2 (as revised).

Synopsys' Objection and Brief Analysis – “Claims and Defenses” Instruction

The dispute regarding this instruction dovetails with the parties' dispute about the specificity of the verdict form. Synopsys seeks to add the language in bold in the above instruction because it believes the jury should be asked to determine infringement based on the two specific features of the ZeBu emulation systems that Mentor accuses of infringing (i.e., flexible probes and value change probes), whereas Mentor believes the jury should determine infringement without reference to any feature. Mentor does not dispute that it has accused two, and only two, features of the Synopsys emulation devices.

Instructing the jury about individual infringement features makes practical sense and matches the facts of the case. It makes practical sense for the same reason identifying these features on the verdict form makes sense—a more precise instruction will allow the jury to better understand the issues. Mentor's vague instruction leaves everyone in the dark and will lead to further disputes in the future.

Identifying specific features in the jury instructions also matches the facts of the case. There is no dispute that the only two features that Mentor contends infringe the '376 are the flexible probes and the value change probes. If these features did not exist, Mentor's case would disappear. Synopsys' ZeBu emulators contain hundreds if not thousands of features and can be operated in ways that do not involve flexible probes or value change probes. In fact, flexible probes and value change probes are both turned off by default. And Synopsys' Rule 30(b)(6) witness testified at deposition that “only a small minority” of emulation runs on a ZeBu system even use flexible probes.

C. OVERVIEW OF APPLICABLE LAW

In deciding the issues of patent infringement, you will be asked to consider specific legal standards. I will give you an overview of those standards now and will review them in more detail before the case is submitted to you for your verdict.

The first issue you will be asked to decide is whether Synopsys has infringed the claims of the '376 patent. Infringement is decided on a claim-by-claim basis. In other words, there may be infringement as to one claim but not infringement as to another. There are a few different ways that a patent may be infringed. I will explain the requirements for each of these types of infringement to you in detail at the conclusion of the case. In general, Synopsys may directly infringe the '376 patent by making, using, selling, or offering for sale in the United States, or by importing into the United States, a product that meets all the requirements of one or more of the asserted claims of the '376 patent. Synopsys may also indirectly infringe the patent by contributing to infringement by another entity, or by inducing another person or entity to infringe. I will provide you with more detailed instructions on the requirements for each of these types of infringement at the conclusion of the case.

Mentor contends that Synopsys infringes in three ways: directly, by inducing others to infringe, and by contributing to the direct infringement of others. If you find that Synopsys infringes in any of these three ways, you will then need to decide any money damages to be awarded to Mentor Graphics to compensate it for the infringement. By instructing you on damages at this time, I am not indicating that you should or should not award damages to Mentor. If you decide to award damages to Mentor, a damages award should put Mentor Graphics in approximately the same financial position that it would have been in if the infringement had not occurred, but in no event may the damages award be less than what Mentor Graphics would have received if it been paid a reasonable royalty. The damages you award are

meant to fairly compensate Mentor Graphics. You may not include in your award any additional amount as a fine or penalty, above what is necessary to fairly compensate Mentor Graphics for the infringement. I will give you more detailed instructions on the calculation of damages at the conclusion of the case.

Source: Federal Circuit Model Jury Instruction A.4 (as revised); *Ricoh Co. v. Quanta Computer Inc.*, 550 F.3d 1325, 1327 (Fed. Cir. 2008), cert denied, 129 S. Ct. 2864 (2009).

D. OUTLINE OF TRIAL

1. Mentor Graphics' Proposed Instruction

The trial will now begin. First, each side may make an opening statement. An opening statement is not evidence. It is simply an opportunity for the lawyers to explain what they expect the evidence will show.

In any legal action, facts must be proven by a required standard of evidence, known as the "burden of proof."

Mentor Graphics must prove its claim of patent infringement and any fair compensation by a preponderance of the evidence. When a party has the burden of proof by a preponderance of the evidence, it means that you must be persuaded that what the party seeks to prove is more probably true than not true. To put it differently, if you were to put Mentor Graphics' and Synopsys' evidence on opposite sides of a scale, the evidence supporting Mentor Graphics' assertions would have to tip the scale, even if slightly, in Mentor Graphics' favor.

After the opening statements, Mentor Graphics will present its evidence in support of its contention that the asserted claims of the '376 patent have been and continue to be infringed by Synopsys. To prove infringement of any claim, Mentor Graphics must persuade you that it is more likely than not that Synopsys has infringed that claim.

Synopsys will present evidence responding to Mentor Graphics' proof of infringement.

During the presentation of the evidence, the attorneys will be allowed brief opportunities to explain what they believe the evidence has shown or what they believe upcoming evidence will show. The attorneys' comments are not evidence and the attorneys are being allowed to comment solely for the purpose of helping you to understand the evidence.

After the evidence has been presented, the attorneys will make closing arguments and I will give you final instructions on the law that applies to the case. These closing arguments by the attorneys are not evidence. After the closing arguments and instructions, you will then decide the case.

Source: Federal Circuit Model Jury Instruction A.5 (as revised).

Mentor Graphics' Objection and Brief Analysis – “Outline of Trial” Instruction:

Mentor Graphics proposes removing all jury instructions on willfulness because there is no willfulness issue to be decided by the jury. To prove willfulness a patentee must show (1) that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent and (2) if this threshold objective standard is satisfied, the patentee must also demonstrate that this objectively-defined risk was either known or so obvious that it should have been known to the accused infringer. *In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007).

The first, objective prong of willfulness is a question for the Court and should not be submitted to the jury. *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003, 1007-8 (Fed. Cir. 2012). In fact, the Federal Circuit Model Jury Instructions point out, “In determining whether to present this instruction to the jury, the parties and the Court should recognize that ‘the objective determination of recklessness … is best decided by the judge as a question of law subject to de novo review.’” Federal Circuit Instruction B.3.10 (citing *Bard*, 682 F.3d 1003, 1007-8).

The second part of the willfulness analysis, Synopsys’ state of mind, is not in dispute and does not require a factual finding. The parties agree Luc Burgun, a co-founder of EVE and later a Synopsys employee, invented the inventions claimed in the ’376 patent. The parties also agree

that EVE was licensed under the '376 patent until the license terminated on October 4, 2012, upon Synopsys' acquisition of EVE. Thus, Synopsys was aware of the patent and aware of the objectively-defined risk of infringement at least as early as October 4, 2012. See *In re Seagate*, 497 F.3d at 1371.

At the meet and confer on August 18, Mentor Graphics and Synopsys agreed to raise this issue with the Court, and Mentor Graphics intends to raise this issue at the pre-trial conference. If the Court determines that there are willfulness issues that should go to the jury, Mentor Graphics agrees to Synopsys' proposed willfulness instructions set forth in Instruction I.D.2.

2. Synopsys' Proposed Instruction

The trial will now begin. First, each side may make an opening statement. An opening statement is not evidence. It is simply an opportunity for the lawyers to explain what they expect the evidence will show.

In any legal action, facts must be proven by a required standard of evidence, known as the “burden of proof.”

Mentor Graphics must prove its claim of patent infringement and any available money damages by a preponderance of the evidence. When a party has the burden of proof by a preponderance of the evidence, it means that you must be persuaded that what the party seeks to prove is more probably true than not true. To put it differently, if you were to put Mentor Graphics’ and Synopsys’ evidence on opposite sides of a scale, the evidence supporting Mentor Graphics’ assertions would have to tip the scale, in Mentor Graphics’ favor.

After the opening statements, Mentor Graphics will present its evidence in support of its contention that the asserted claims of the ’376 patent have been and continue to be infringed by Synopsys **and that the infringement has been and continues to be willful.** To prove infringement of any claim, Mentor Graphics must persuade you that it is more likely than not that Synopsys has infringed that claim. **To persuade you that any infringement was willful, Mentor Graphics must prove that the infringement was willful by clear and convincing evidence; that is, evidence that it is highly probable that the infringement was willful.**

Synopsys will present evidence responding to Mentor Graphics’ proof of infringement **and willfulness.**

During the presentation of the evidence, the attorneys will be allowed brief opportunities to explain what they believe the evidence has shown or what they believe upcoming evidence will show. The attorneys’ comments are not evidence and the attorneys are being allowed to comment solely for the purpose of helping you to understand the evidence.

After the evidence has been presented, the attorneys will make closing arguments and I will give you final instructions on the law that applies to the case. These closing arguments by the attorneys are not evidence. After the closing arguments and instructions, you will then decide the case.

Source: Federal Circuit Model Jury Instruction A.5 (as revised).

Synopsys' Objection and Brief Analysis – “Outline of Trial” Instruction

The parties' dispute whether this instruction should refer to willfulness because they dispute whether a willfulness instruction is appropriate at all. Synopsys believes that a willfulness instruction should remain, and that willfulness should be referred to in this instruction, until the Court can rule on the threshold question of objective recklessness, which Synopsys plans to present separately before trial. Accordingly, resolution of the dispute about the willfulness instruction (Instruction I) will also resolve the dispute about the language in this instruction.

II. INSTRUCTIONS AT CLOSE OF EVIDENCE

A. SUMMARY OF CONTENTIONS

1. Mentor Graphics' Proposed Instruction

As I did at the start of the case, I will first give you a summary of each side's contentions in this case. I will then provide you with detailed instructions on what each side must prove to win on each of its contentions.

As I previously told you, Mentor Graphics contends that Synopsys infringes the '376 patent. The asserted claims of the '376 patent are: 1, 24, 26, 27, and 28. Mentor Graphics also argues that Synopsys has actively induced infringement of these claims of the '376 patent by others, and contributed to the infringement of these claims of the '376 patent by others. The products that are alleged to infringe are emulation systems: ZeBu-Server, ZeBu-Server 2, ZeBu-Server 3, and ZeBu-Blade.

Synopsys denies that it has infringed the asserted claims of the '376 patent and denies that it has induced or contributed to any infringement of the '376 patent.

Your job is to decide whether Synopsys has infringed the asserted claims of the '376 patent. If you decide that any claim of the '376 patent has been infringed, you will then need to decide any money damages to be awarded to Mentor Graphics to compensate it for the infringement.

Source: Federal Circuit Model Jury Instruction B.1 (as revised).

Mentor Graphics' Objection and Brief Analysis – “Summary of Contentions” Instruction

As discussed with respect to the proposed instruction “Claims and Defenses” (Instruction I.B), Synopsys’ discussion of the accused “features” of Synopsys’ emulation systems, namely the “flexible probes and value change probes,” is unnecessary and prejudicial. Synopsys’

instructions misdirect the jury to consider the accused “features” rather than Synopsys’ emulation systems, which are the accused products under 35 U.S.C. § 271.

Mentor Graphics also objects to Synopsys’ instructions about its non-infringement contentions as premature and confusing. Synopsys’ instructions differentiate between infringement of method claims and apparatus claims before the Court has instructed the jury on what constitutes infringement of either method or apparatus claims. (See Instruction II.G, “Direct Infringement”).

Mentor Graphics finally objects to all jury instructions relating to willfulness because there is no willfulness issue to be decided by the jury, as discussed with respect to the proposed instruction entitled “Outline of Trial” (Instruction I.D). If, however, the Court determines that there are willfulness issues that should go to the jury, Mentor Graphics agrees to Synopsys’ proposed willfulness instructions set forth in Instruction II.A.2.

2. Synopsys' Proposed Instruction

As I did at the start of the case, I will first give you a summary of each side's contentions in this case. I will then provide you with detailed instructions on what each side must prove to win on each of its contentions.

As I previously told you, Mentor Graphics contends that Synopsys infringes the '376 patent. The asserted claims of the '376 patent are: 1, 24, 26, 27, and 28. Mentor Graphics also argues that Synopsys has actively induced direct infringement of these claims of the '376 patent by others, and has contributed to the direct infringement of these claims of the '376 patent by others. **The features that are alleged to infringe are the flexible probe and value change probe features** of the following emulation systems: ZeBu-Server, ZeBu-Server 2, ZeBu-Server 3, and ZeBu-Blade.

Synopsys denies that it has infringed the asserted claims of the '376 patent and denies that it has induced or contributed to any direct infringement of the '376 patent. **Synopsys contends that its accused ZeBu emulation systems do not infringe the '376 patent because neither Synopsys nor its customers perform every step of claims 1, 24, 26, and 27 of the '376 patent and its accused ZeBu emulation systems do not meet all the elements of claim 28 of the '376 patent.**

Your job is to decide whether Synopsys has infringed the asserted claims of the '376 patent. If you decide that any claim of the '376 patent has been infringed, you will then need to decide any money damages to be awarded to Mentor Graphics to compensate it for the infringement. You will also need to make a finding as to whether the infringement was willful. If you decide that any infringement was willful, that decision should not affect any damages award you make. I will take willfulness into account later.

Source: Federal Circuit Model Jury Instruction B.1 (as revised).

Synopsys' Objection and Brief Analysis – “Summary of Contentions” Instruction

Synopsys' objection to Mentor's proposed instruction on this point is the same as its objection regarding the “Claims and Defenses” instruction, which Synopsys repeats here:

The dispute regarding this instruction dovetails with the parties' dispute about the specificity of the verdict form. Synopsys seeks to add the language in bold in the above instruction because it believes the jury should be asked to determine infringement based on the two specific features of the ZeBu emulation systems that Mentor accuses of infringing (i.e., flexible probes and value change probes), whereas Mentor believes the jury should determine infringement without reference to any feature. Mentor does not dispute that it has accused two, and only two, features of the Synopsys emulation devices.

Instructing the jury about individual infringement features makes practical sense and matches the facts of the case. It makes practical sense for the same reason identifying these features on the verdict form makes sense—a more precise instruction will allow the jury to better understand the issues. Mentor's vague instruction leaves everyone in the dark and will lead to further disputes in the future.

Identifying specific features in the jury instructions also matches the facts of the case. There is no dispute that the only two features that Mentor contends infringe the '376 are the flexible probes and the value change probes. If these features did not exist, Mentor's case would disappear. Synopsys' ZeBu emulators contain hundreds if not thousands of features and can be operated in ways that do not involve flexible probes or value change probes. In fact, flexible probes and value change probes are both turned off by default. And Synopsys' Rule 30(b)(6) witness testified at deposition that “only a small minority” of emulation runs on a ZeBu system even use flexible probes.

B. THE PATENT AT ISSUE

I have already determined the meaning of certain claim terms of the '376 patent. You have been given a document reflecting those meanings. For a claim term for which I have not provided you with a definition, you should apply the ordinary meaning. You are to apply my definitions of these terms throughout this case. However, my interpretation of the language of the claims should not be taken as an indication that I have a view regarding issues such as infringement of the '376 patent. Those issues are yours to decide.

Source: Federal Circuit Model Jury Instruction A.3 (as revised).

C. THE ROLE OF THE CLAIMS OF A PATENT

Before you can decide many of the issues in this case, you will need to understand the role of patent “claims.” The patent claims are the numbered sentences at the end of each patent. The claims are important because it is the words of the claims that define what a patent covers. The figures and text in the rest of the patent provide a description and/or examples of the invention and provide a context for the claims, but it is the claims that define the breadth of the patent’s coverage. Each claim is effectively treated as if it were a separate patent, and each claim may cover more or less than another claim. Therefore, what a patent covers depends, in turn, on what each of its claims covers.

You will first need to understand what each claim covers in order to decide whether or not there is infringement of the claim. The law says that it is my role to define the terms of the claims. You have been given a document that includes my definitions. You must accept my definitions of these words in the claims as being correct. It is your job to take these definitions and apply them as you consider whether Synopsys infringes the asserted patent claims.

I instruct you that the following claim terms have the following definitions, all of which are also included in the document you have been given:

Claim Term	Construction
gate-level netlist	“a list of gates and their inputs, outputs, and interconnects”
gate-level design	“a list of gates and their inputs, outputs, and interconnects”
instrumentation signal	“output signal added or preserved during logic synthesis that indicates whether a corresponding RTL source code statement is active”
simulating a gate-level design	“modeling the operation of a gate level design using software and/or hardware”
sensitivity list	“a list of signals to which a process is responsive”
process	“a description of the behavior of some portion of a circuit design”
generating logic	“generating gates”

If I have not provided a specific definition for a given term, you are to use the ordinary meaning of that term.

Source: Federal Circuit Model Jury Instruction B.2.1 (as revised).

D. HOW A CLAIM DEFINES WHAT IT COVERS

I will now explain how a claim defines what it covers.

A claim sets forth, in words, a set of requirements. Each claim sets forth its requirements in a single sentence. If a device or a method satisfies each of these requirements, then it is covered by the claim.

There can be several claims in a patent. Each claim may be narrower or broader than another claim by setting forth more or fewer requirements. The coverage of a patent is assessed claim-by-claim. In patent law, the requirements of a claim are often referred to as “claim elements” or “claim limitations.” When a product meets all of the requirements of a claim, the claim is said to “cover” that thing, and that thing is said to “fall” within the scope of that claim. In other words, a claim covers a product or process where each of the claim elements or limitations is present in that product or process.

Sometimes the words in a patent claim are difficult to understand, and therefore it is difficult to understand what requirements these words impose. It is my job to explain to you the meaning of the words in the claims and the requirements these words impose.

As I just instructed you, there are certain specific terms that I have defined and you are to apply the definitions that I provide to you.

By understanding the meaning of the words in a claim and by understanding that the words in a claim set forth the requirements that a product or process must meet in order to be covered by that claim, you will be able to understand the scope of coverage for each claim. Once you understand what each claim covers, then you are prepared to decide whether Mentor has proven that Synopsys infringes the asserted claims of the '376 patent.

Authorities

For “comprising,” *see, e.g.*, *Cook Biotech Inc. v. ACell, Inc.*, 460 F.3d 1365, 1373-78 (Fed. Cir. 2006); *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1368 (Fed. Cir. 2003) (“The transition ‘comprising’ in a method claim . . . is open-ended and allows for additional steps.”); for “consisting of,” *see, e.g.*, *Conoco, Inc. v. Energy & Env'tl. Int'l, L.C.*, 460 F.3d 1349, 1358-61 (Fed. Cir. 2006); *Vehicular Techs. Corp. v. Titan Wheel Int'l, Inc.*, 212 F.3d 1377, 1383 (Fed. Cir. 2000) (“In simple terms, a drafter uses the phrase ‘consisting of’ to mean ‘I claim what follows and nothing else.’”); for “consisting essentially of,” *see, e.g.*, *CIAS, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1361 (Fed. Cir. 2007); *AK Steel Corp. v. Sollac & Ugine*, 344 F.3d 1234, 1239 (Fed. Cir. 2003) (“consisting essentially of” is a middle ground between open-ended term “comprising” and closed-ended phrase “consisting of”).

Source: Federal Circuit Model Jury Instruction B.2.2 (as revised).

E. INDEPENDENT AND DEPENDENT CLAIMS

This case involves two types of patent claims: independent claims and dependent claims.

An “independent claim” sets forth all of the requirements that must be met in order to be covered by that claim. Thus, it is not necessary to look at any other claim to determine what an independent claim covers. In this case, claims 1, 24, and 28 of the ’376 patent are each independent claims.

Claims 26 and 27 of the ’376 patent are “dependent claims.” A dependent claim does not itself recite all of the requirements of the claim but refers to another claim for some of its requirements. In this way, the claim “depends” on another claim. A dependent claim incorporates all of the requirements of the claim to which it refers. The dependent claim then adds its own additional requirements. To determine what a dependent claim covers, it is necessary to look at both the dependent claim and any other claim to which it refers. A product or method that meets all of the requirements of both the dependent claim and the claims to which it refers is covered by that dependent claim and the independent claim.

Source: Federal Circuit Model Jury Instruction B.2.2A (as revised).

F. INFRINGEMENT GENERALLY

I will now instruct you how to decide whether or not Synopsys has infringed the '376 patent. Infringement is assessed on a claim-by-claim basis. Therefore, there may be infringement as to one claim but no infringement as to another.

In this case, there are three possible ways that a claim may be infringed. The three types of infringement are called: (1) direct infringement; (2) active inducement; and (3) contributory infringement. Active inducement and contributory infringement are referred to as indirect infringement. There cannot be indirect infringement without someone else engaging in direct infringement. To prove indirect infringement, Mentor Graphics must also prove that Synopsys' indirect infringement caused direct infringement.

In this case, Mentor Graphics has alleged that Synopsys directly infringes the '376 patent. In addition, Mentor Graphics has alleged that Synopsys' customers directly infringe the '376 patent, and Synopsys is liable for actively inducing or contributing to that direct infringement by Synopsys' customers.

In order to prove infringement, Mentor Graphics must prove that the requirements for one or more of these types of infringement are met by a preponderance of the evidence, i.e., that it is more likely than not that all of the requirements of one or more of each of these types of infringement have been proved.

I will now explain each of these types of infringement in more detail.

Authorities

Warner-Lambert Co. v. Teva Pharms. USA, Inc., 418 F.3d 1326, 1341 n.15 (Fed. Cir. 2005) (infringement must be proven by a preponderance of the evidence); *Seal-Flex, Inc. v. Athletic Track & Court Constr.*, 172 F.3d 836, 842 (Fed. Cir. 1999) (a patentee must "prove that the accused product or process contains, either literally or under the doctrine of equivalents, every

limitation of the properly construed claim”); *Morton Int'l, Inc. v. Cardinal Chem. Co.*, 5 F.3d 1464, 1468-69 (Fed. Cir. 1993) (upholding lower court’s finding of noninfringement based on plaintiff’s failure to prove that the accused product met all of the claimed requirements).

Source: Federal Circuit Model Jury Instruction B.3.1 (as revised).

G. DIRECT INFRINGEMENT

1. Mentor Graphics' Proposed Instruction

In order to prove direct infringement of method claims 1, 24, 26, and 27, Mentor Graphics must prove by a preponderance of the evidence, *i.e.*, that it is more likely than not, that Synopsys performed every step of the asserted claim and did so without the permission of Mentor Graphics after October 4, 2012.

In order to prove direct infringement of claim 28, Mentor Graphics must prove by a preponderance of the evidence, *i.e.*, that it is more likely than not, that Synopsys made, used, sold, offered for sale within, or imported into the United States a product that meets all the limitations of claim 28.

You must determine, separately for each asserted claim, whether or not there is infringement. There is one exception to this rule. If you find that a claim on which other claims depend is not infringed, there cannot be infringement of any dependent claim that refers directly or indirectly to that independent claim. On the other hand, if you find that an independent claim has been infringed, you must still decide, separately, whether the additional requirements of any claims that depend from the independent claim are met, thus, whether those claims have also been infringed.

Authorities

Kim v. ConAgra Foods, Inc., 465 F.3d 1312, 1316, n.1 (Fed. Cir. 2006) (dependent claims not infringed when independent claim not infringed); *MicroStrategy Inc. v. Bus. Objects, S.A.*, 429 F.3d 1344, 1352-53 (Fed. Cir. 2005) (no literal infringement where accused product did not contain every element of the claim); *Cross Med. Prods. v. Medtronic Sofamor Danek*, 424 F.3d 1293, 1309-11 (Fed. Cir. 2005) (no direct infringement where accused product did not include each claim limitation); *Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1353-54 (Fed. Cir.

2001) (no literal infringement where all of the elements of the claim not present in the accused system); *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261 (Fed. Cir. 1986) (affirming finding of direct infringement based on circumstantial evidence).

Source: Federal Circuit Model Jury Instruction B.3.1A (as revised).

Mentor Graphics' Objection and Brief Analysis – “Direct Infringement” Instruction:

As discussed with respect to the proposed instruction “Claims and Defenses” (Instruction I.B), Synopsys’ discussion of the accused “features” of Synopsys’ emulation systems, namely the “flexible probes and value change probes,” is unnecessary and prejudicial. Synopsys’ instructions misdirect the jury to consider the accused “features” rather than Synopsys’ emulation systems, which are the accused products under 35 U.S.C. § 271.

2. Synopsys' Proposed Instruction

In order to prove direct infringement of method claims 1, 24, 26, and 27, Mentor Graphics must prove by a preponderance of the evidence, *i.e.*, that it is more likely than not, that Synopsys performed every step of the asserted claim and did so without the permission of Mentor Graphics after October 4, 2012. **In this case, Mentor Graphics contends that the use of flexible probes and value change probes is infringing, so Mentor must prove by a preponderance of the evidence that the use of flexible probes or value change probes meet each and every element of an asserted claim.**

In order to prove direct infringement of claim 28, Mentor Graphics must prove by a preponderance of the evidence, *i.e.*, that it is more likely than not, that Synopsys made, used, sold, offered for sale within, or imported into the United States a product that meets all the limitations of claim 28. **In this case, Mentor Graphics contends that flexible probes and value change probes are infringing, so Mentor Graphics must prove by a preponderance of the evidence that the use or sale of ZeBu emulation systems using flexible probes or value change probes meets each and every element of an asserted claim.**

You must determine, separately for each asserted claim, whether or not there is infringement. There is one exception to this rule. If you find that a claim on which other claims depend is not infringed, there cannot be infringement of any dependent claim that refers directly or indirectly to that independent claim. On the other hand, if you find that an independent claim has been infringed, you must still decide, separately, whether the additional requirements of any claims that depend from the independent claim are met, thus, whether those claims have also been infringed.

Authorities

Kim v. ConAgra Foods, Inc., 465 F.3d 1312, 1316, n.1 (Fed. Cir. 2006) (dependent claims not infringed when independent claim not infringed); *MicroStrategy Inc. v. Bus. Objects, S.A.*, 429 F.3d 1344, 1352-53 (Fed. Cir. 2005) (no literal infringement where accused product did not

contain every element of the claim); *Cross Med. Prods. v. Medtronic Sofamor Danek*, 424 F.3d 1293, 1309-11 (Fed. Cir. 2005) (no direct infringement where accused product did not include each claim limitation); *Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1353-54 (Fed. Cir. 2001) (no literal infringement where all of the elements of the claim not present in the accused system); *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261 (Fed. Cir. 1986) (affirming finding of direct infringement based on circumstantial evidence).

Source: Federal Circuit Model Jury Instruction B.3.1A (as revised).

Synopsys' Objection and Brief Analysis – “Direct Infringement” Instruction

Synopsys' objection to Mentor's proposed instruction on this point is the same as its objections regarding the “Claims and Defenses” and “Summary of Contentions” instructions, which Synopsys repeats here:

The dispute regarding this instruction dovetails with the parties' dispute about the specificity of the verdict form. Synopsys seeks to add the language in bold in the above instruction because it believes the jury should be asked to determine infringement based on the two specific features of the ZeBu emulation systems that Mentor accuses of infringing (i.e., flexible probes and value change probes), whereas Mentor believes the jury should determine infringement without reference to any feature. Mentor does not dispute that it has accused two, and only two, features of the Synopsys emulation devices.

Instructing the jury about individual infringement features makes practical sense and matches the facts of the case. It makes practical sense for the same reason identifying these features on the verdict form makes sense—a more precise instruction will allow the jury to better understand the issues. Mentor's vague instruction leaves everyone in the dark and will lead to further disputes in the future.

Identifying specific features in the jury instructions also matches the facts of the case. There is no dispute that the only two features that Mentor contends infringe the '376 are the flexible probes and the value change probes. If these features did not exist, Mentor's case would disappear. Synopsys' ZeBu emulators contain hundreds if not thousands of features and can be

operated in ways that do not involve flexible probes or value change probes. In fact, flexible probes and value change probes are both turned off by default. And Synopsys' Rule 30(b)(6) witness testified at deposition that "only a small minority" of emulation runs on a ZeBu system even use flexible probes.

H. INDIRECT INFRINGEMENT—ACTIVE INDUCEMENT

Mentor Graphics alleges that Synopsys is liable for infringement by actively inducing its customers to directly infringe the '376 patent. As with direct infringement, you must determine whether there has been active inducement on a claim-by-claim basis.

Synopsys is liable for active inducement of a claim only if Mentor Graphics proves by a preponderance of the evidence that the following occurred after October 4, 2012:

- (1) a Synopsys customer carried out acts that directly infringe an asserted claim of the '376 patent;
- (2) Synopsys took action specifically intending to cause a customer to carry out the infringing acts;
- (3) Synopsys was aware of the '376 patent; and
- (4) Synopsys knew that the acts, if taken, would constitute infringement of the '376 patent, or believed there was a high probability that the acts, if taken, would constitute infringement of the '376 patent, but deliberately avoided confirming that belief.

In order to establish inducement of infringement, it is not sufficient that Synopsys' customers directly infringe the claim. Nor is it sufficient that Synopsys was aware of the act(s) by its customers that allegedly constitute direct infringement. Rather, in order to find inducement of infringement, you must find that Synopsys specifically intended its customers to infringe the '376 patent or that Synopsys believed there was a high probability that its customers would infringe the '376 patent, but deliberately avoided learning the infringing nature of its customers' acts.

Authorities

35 U.S.C. § 271(b); *Global-Tech Appliances, Inc. v. SEB S. A.*, ___ U.S. ___, ___; 131 S.Ct. 2060, 2068-2071; 179 L.Ed. 1167, 1177-1180 (2012); *Muniauction Inc. v. Thomson Corp.*, 532 F.3d 1318, 1329-30 (Fed. Cir. 2008); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1340 (Fed. Cir. 2009); *DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1306 (Fed. Cir. 2006) (“[I]nducement requires that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another’s infringement.”) (citation and internal quotation marks omitted); *MGM Studios Inc. v. Grokster*, 419 F.3d 1005 (Fed. Cir. 2005); *Insituform Techs., Inc. v. CAT Contracting, Inc.*, 385 F.3d 1360, 1377-78 (Fed. Cir. 2004) (inducer must have actual or constructive knowledge of the patent); *Ferguson Beauregard/Logic Controls, Div. of Dover Res., Inc. v. Mega Sys., LLC*, 350 F.3d 1327, 1342 (Fed. Cir. 2003) (no inducement where evidence did not show defendant knew or should have known that his actions were encouraging infringement); *Warner-Lambert Co. v. Apotex Corp.*, 316 F.3d 1348, 1363-66 (Fed. Cir. 2003) (no infringement where lack of intent to induce).

Source: Federal Circuit Model Jury Instruction B.3.2 (as revised).

I. INDIRECT INFRINGEMENT—CONTRIBUTORY INFRINGEMENT

You must determine whether Synopsys is liable for contributory infringement by contributing to the direct infringement of the '376 patent by its customers. As with direct infringement, you must determine contributory infringement on a claim-by-claim basis.

Synopsys is liable for contributory infringement of a claim if Mentor Graphics proves by a preponderance of the evidence, i.e., that it is more likely than not that each of the following requirements is met and that each occurred after October 4, 2012:

- (1) direct infringement of the '376 patent by a Synopsys customer;
- (2) Synopsys sells, offers to sell, or imports within the United States a component of an emulation system that is used to practice an asserted claim of the '376 patent;
- (3) the component constitutes a material part of the claimed invention;
- (4) the component has no substantial, noninfringing use; and
- (5) Synopsys is aware of the '376 patent and knows that there is no substantial, noninfringing use for the component.

The component may be a hardware component or a software feature.

Mentor Graphics does not need to prove that the entire emulation system has no non-infringing uses—only that the hardware component or software feature is not a common component suitable for non-infringing use. Synopsys may not escape liability as a contributory infringer merely by embedding the component in a larger product with other additional, non-infringing features.

Authorities

35 U.S.C. § 271(c) (“not a staple article”); *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476 (1964) (knowledge of plaintiff’s patent and that the part supplied is significant); *Ricoh Co. v. Quanta Computer Inc.*, 550 F.3d 1325, 1327 (Fed. Cir. 2008), cert denied, 129 S.

Ct. 2864 (2009); *Alloc, Inc. v. ITC*, 342 F.3d 1361, 1374 (Fed. Cir. 2003) (affirming determination of no contributory infringement); *Mentor H/S, Inc. v. Med. Device Alliance, Inc.*, 244 F.3d 1365 (Fed. Cir. 2001) (reversing district court's finding of no contributory infringement and inducement); *Hewlett-Packard Co. v. Bausch & Lomb, Inc.*, 909 F.2d 1464, 1469 (Fed. Cir. 1990) (differentiating contributory infringement from inducement); *Preemption Devices, Inc. v. Minn. Mining & Mfg. Co.*, 803 F.2d 1170, 1174 (Fed. Cir. 1986) (direct infringement findings supported contributory infringement findings).

Source: Federal Circuit Model Jury Instruction B.3.3 (as revised); Northern District of California Model Jury Instruction B.3.8 (as revised).

J. WILLFUL INFRINGEMENT

Mentor Graphics' Objections and Brief Analysis – “Willfulness” Instruction:

Mentor Graphics objects to Synopsys' proposed jury instruction relating to willfulness, as discussed with respect to the instruction “Outline of Trial” (Instruction I.D) because there is no willfulness issue to be decided by the jury. If, however, the Court decides that certain willfulness issues should be decided by the jury, Mentor Graphics proposes the instruction below.

Unlike Synopsys' proposed instruction, Mentor Graphics' proposed instruction does not discuss the first, objective prong of the willfulness analysis. The first, objective prong of willfulness is a question for the Court and should not be submitted to the jury. *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003, 1007-8 (Fed. Cir. 2012). The Federal Circuit, in *Bard*, held that “the ultimate legal question of whether a reasonable person would have considered there to be a high likelihood of infringement of a valid patent should always be decided as a matter of law by the judge.” *Id.* at 10070. In fact, the Federal Circuit Model Jury Instructions point out, “[i]n determining whether to present this instruction to the jury, the parties and the Court should recognize that ‘the objective determination of recklessness ... is best decided by the judge as a question of law subject to de novo review.’” Federal Circuit Instruction B.3.10 (citing *Bard*, 682 F.3d 1003, 1007-8).

1. Mentor Graphics' Proposed Instruction [To be included in the verdict form only if the Court decides that certain willfulness issues should be decided by the jury]

In this case, Mentor Graphics argues both that Synopsys infringed and, further, that Synopsys infringed willfully. If you have decided that Synopsys has infringed, you must then decide whether Mentor has proven, by clear and convincing evidence whether this infringement

was willful. To establish that this infringement was willful, Mentor must prove, by clear and convincing evidence, that Synopsys acted recklessly.

To prove that Synopsys acted recklessly, Mentor Graphics must prove that Synopsys actually knew or should have known that its actions constituted an unjustifiably high risk of infringement of a valid and enforceable patent. To determine whether Synopsys had this state of mind, consider all facts which may include, but are not limited, to:

- (1) Whether or not Synopsys acted in accordance with the standards of commerce for its industry;
- (2) Whether or not Synopsys intentionally copied a product of Mentor Graphics that is covered by the Mentor Graphics' patent;
- (3) Whether or not there was a reasonable basis to believe that Synopsys did not infringe or had a reasonable defense to infringement;
- (4) Whether or not Synopsys made a good-faith effort to avoid infringing '376 patent, for example, whether Synopsys attempted to design around the asserted patent; and
- (5) Whether or not Synopsys tried to cover up its infringement.

Authorities

35 U.S.C. § 284; *In re Seagate Tech., LLC*, 497 F.3d 1360 (Fed. Cir. 2007) (standard for finding willfulness); *Knorr-Bremse v. Dana Corp.*, 383 F.3d 1337 (Fed. Cir. 2004) (en banc) (opinion of counsel defense); *Crystal Semiconductor Corp. v. Tritech Microelectronics Int'l, Inc.*, 246 F.3d 1336, 1346 (Fed. Cir. 2001) (burden of proof for willfulness); *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1354 (Fed. Cir. 1999) (knowledge of the patent necessary to show willfulness); *Read Corp. v. Portec, Inc.*, 970 F.2d 816 (Fed. Cir. 1992) (identifying factors that

may show willfulness); *Gustafson, Inc. v. Intersystems Indus. Prods., Inc.*, 897 F.2d 508, 510 (Fed. Cir. 1990) (history of Federal Circuit decisions on willfulness).

Source: Federal Circuit Model Jury Instruction B.3.10 (as revised); *In re Seagate Tech., LLC*, 497 F.3d 1360 (Fed. Cir. 2007)

2. Synopsys' Proposed Instruction

In this case, Mentor Graphics argues both that Synopsys infringed and, further, that Synopsys infringed willfully. If you have decided that Synopsys has infringed, you must then decide whether Mentor has proven, by clear and convincing evidence whether this infringement was willful. To establish that this infringement was willful, Mentor must prove, by clear and convincing evidence, that Synopsys acted recklessly.

To prove that Synopsys acted recklessly, Mentor Graphics must prove two things by clear and convincing evidence:

The first part of the test is objective: Mentor Graphics must prove that Synopsys acted despite a high likelihood that Synopsys' actions infringed a valid and enforceable patent. In making this determination, you may not consider Synopsys' state of mind. Legitimate or credible defenses to infringement, even if not ultimately successful, demonstrate a lack of recklessness. Ordinarily, willfulness will depend on conduct before the filing of the lawsuit, so the focus of your inquiry should be on Synopsys' conduct prior to September 27, 2012, when this lawsuit began.

Only if you conclude that the Synopsys' conduct was reckless do you need to consider the second part of the test. The second part of the test does depend on Synopsys' state of mind. Mentor Graphics must persuade you that Synopsys actually knew or should have known that its actions constituted an unjustifiably high risk of infringement of a valid and enforceable patent. To determine whether Synopsys had this state of mind, consider all facts which may include, but are not limited, to:

- (1) Whether or not Synopsys acted in accordance with the standards of commerce for its industry;**
- (2) Whether or not Synopsys intentionally copied a product of Mentor Graphics that is covered by the Mentor Graphics' patent;**

- (3) Whether or not there is a reasonable basis to believe that Synopsys did not infringe or had a reasonable defense to infringement;**
- (4) Whether or not Synopsys made a good-faith effort to avoid infringing ‘376 patent, for example, whether Synopsys attempted to design around the asserted patent; and**
- (5) Whether or not Synopsys tried to cover up its infringement.**

Authorities

35 U.S.C. § 284; *In re Seagate Tech., LLC*, 497 F.3d 1360 (Fed. Cir. 2007) (standard for finding willfulness); *Knorr-Bremse v. Dana Corp.*, 383 F.3d 1337 (Fed. Cir. 2004) (en banc) (opinion of counsel defense); *Crystal Semiconductor Corp. v. Tritech Microelectronics Int'l, Inc.*, 246 F.3d 1336, 1346 (Fed. Cir. 2001) (burden of proof for willfulness); *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1354 (Fed. Cir. 1999) (knowledge of the patent necessary to show willfulness); *Read Corp. v. Portec, Inc.*, 970 F.2d 816 (Fed. Cir. 1992) (identifying factors that may show willfulness); *Gustafson, Inc. v. Intersystems Indus. Prods., Inc.*, 897 F.2d 508, 510 (Fed. Cir. 1990) (history of Federal Circuit decisions on willfulness).

Source: Federal Circuit Model Jury Instruction B.3.10 (as revised); *In re Seagate Tech., LLC*, 497 F.3d 1360 (Fed. Cir. 2007).

Synopsys' Objection and Brief Analysis – “Willfulness” Instruction

The parties' dispute whether the objective prong of the willfulness instruction should be given and referred to in the outline of the trial; they do not dispute the content of the model instruction should the Court give the entire instruction. Synopsys believes that this entire instruction should remain until the Court can rule on the threshold question of objective recklessness, which Synopsys plans to present separately before trial. There are two prongs to willfulness in patent law: an objective prong and a subjective prong. *See In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007). The threshold objective prong requires the patentee to show, by clear and convincing evidence, that the infringer acted “despite an objectively high likelihood that its actions constitute infringement of a valid patent.” *Id.* Legitimate or credible defenses to infringement, even if not ultimately successful, defeat this prong. *Bard Peripheral*

Vascular, Inc. v. W.L. Gore & Assocs., Inc., 682 F.3d 1003, 1005 (Fed. Cir. 2012) (internal quotations and citation omitted). The objective prong is a question of law to be decided by the Court. *Id.* at 1006-07. Nonetheless, courts may allow the jury to determine underlying facts of the objective prong in the first instance. *Id.* at 1008.

The subjective prong requires the patentee to show, also by clear and convincing evidence, whether the objectively-defined risk “was either known or so obvious that it should have been known to the accused infringer.” *Seagate*, 497 F.3d at 1371. The subjective prong includes considerations of the infringer’s state of mind and such factors as whether there was intentional copying or an effort to cover up infringement. *Knorr-Bremse v. Dana Corp.*, 383 F.3d 1337, 1348-49 (Fed. Cir. 2004) (en banc). This prong is a question of fact to be decided by the jury and “must be addressed only after the objective requirement is satisfied.” *Bard*, 682 F.3d at 1007.

Mentor contends that there are no issues of fact with respect to the subjective prong and that it is entitled to judgment as a matter of law, leaving only the objective prong for this Court to decide. Mentor did not seek summary judgment on this issue but now argues that the jury should not be asked to decide willfulness at all. Synopsys believes that it is appropriate to leave willfulness in the verdict form because Mentor has neither sought nor received summary judgment on this issue, and because there are at least factual issues on this point. As the model jury instructions demonstrate, mere awareness of a patent is not sufficient, and considerations such as state of mind, copying, and covering up the infringement are relevant. Synopsys does intend to raise the objective prong of willfulness for decision before trial which, if successful, would remove willfulness from the case. Until the Court rules either way, however, it should remain in the jury instructions.

K. DAMAGES—GENERAL

1. Mentor Graphics' Proposed Instruction

If you find that Synopsys infringed any asserted claim of the '376 patent, you must then consider what amount of damages to award to Mentor Graphics. I will now instruct you about the measure of damages. By instructing you on damages, I am not suggesting which party should win this case.

The damages you award must be adequate to compensate Mentor Graphics for the infringement. They are not meant to punish Synopsys. While Mentor Graphics is not required to prove its damages with mathematical precision, it must prove them with reasonable certainty. Mentor Graphics has the burden to persuade you of the amount of its damages by a preponderance of the evidence. Your damages award should put Mentor Graphics in approximately the same financial position that it would have been in had the infringement not occurred. You should not award damages that are remote or speculative.

There are different types of damages that Mentor Graphics may be entitled to recover. In this case, Mentor Graphics seeks lost profits and a reasonable royalty. Lost profits consist of any actual reduction in business profits Mentor Graphics suffered as a result of Synopsys' infringement. A reasonable royalty is defined as the money amount Mentor Graphics and Synopsys would have agreed upon as a fee for use of the invention before infringement began.

I will give more detailed instructions regarding damages shortly. Note, however, that Mentor Graphics is entitled to at least a reasonable royalty for each sale of an infringing emulation system.

Authorities

See 35 U.S.C. § 284; *Dow Chem. Co. v. Mee Indus., Inc.*, 341 F.3d 1370, 1381-82 (Fed. Cir. 2003); *Integra Lifesciences I, Ltd. v. Merck KGaA*, 331 F.3d 860, 870 (Fed. Cir. 2003); *Grain Processing Corp. v. Am. Maize-Pros. Co.*, 185 F.3d 1341, 1349 (Fed. Cir. 1999); *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1108-09 (Fed. Cir. 1996); *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995) (en banc); *Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 1065 (Fed. Cir. 1983).

Source: Federal Circuit Model Jury Instruction B.6.1 (as revised), Northern District of California Model Jury Instruction B.5.1 (as revised).

Mentor Graphics' Objection and Brief Analysis – “Damages - Generally” Instruction

The disputed instruction, which is not derived from any model instructions, prematurely addresses a subject that arises later, and is an inappropriate attempt by Synopsys to direct undue attention to its own damages arguments. Issues regarding the “entire value of the emulation system” are properly addressed by the “Lost Profits—The ‘But For’ Test” (Instruction II.L); “Lost Profits—Demand” (Instruction II.M); “Lost Profits—Amount of Profit” (Instruction II.P); “Lost Profits—Collateral Sales” (Instruction II.S), and “Reasonable Royalty—Relevant Factors” (Instruction II.V). Synopsys’ proposed instruction fails to provide the proper framework and context about whether the entire emulation system constitutes a single functional unit.

As discussed with respect to “Claims and Defenses” (Instruction I.B), Synopsys’ instruction misdirects the jury to consider the accused “features” rather than Synopsys’ emulation systems, which are the accused products under 35 U.S.C. § 271.

2. Synopsys' Proposed Instruction

If you find that Synopsys infringed any asserted claim of the '376 patent, you must then consider what amount of damages to award to Mentor Graphics. I will now instruct you about the measure of damages. By instructing you on damages, I am not suggesting which party should win this case.

The damages you award must be adequate to compensate Mentor Graphics for the infringement. They are not meant to punish Synopsys. While Mentor Graphics is not required to prove its damages with mathematical precision, it must prove them with reasonable certainty. Mentor Graphics has the burden to persuade you of the amount of its damages by a preponderance of the evidence. Your damages award should put Mentor Graphics in approximately the same financial position that it would have been in had the infringement not occurred. You should not award damages that are remote or speculative.

There are different types of damages that Mentor Graphics may be entitled to recover. In this case, Mentor Graphics seeks a reasonable royalty. A reasonable royalty is defined as the money amount Mentor Graphics and Synopsys would have agreed upon as a fee for use of the invention before infringement began.

I will give more detailed instructions regarding damages shortly. Note, however, that Mentor Graphics is entitled to at least a reasonable royalty for each sale of an infringing emulation system.

You must also consider that the Synopsys emulation systems that Mentor Graphics contends are infringing contain many features, only two of which (flexible probes and value change probes) are accused of infringement here. You must consider that Mentor Graphics is not entitled to recover damages for the entire value of the emulation system, including unpatented features, unless it can show that all the features of the emulation system constitute a single functional unit. In other words, damages must not include items that essentially have no functional relationship to the competitive product and that have

been sold with the competitive product only as a matter of convenience or business advantage.

Authorities

See 35 U.S.C. § 284; *Dow Chem. Co. v. Mee Indus., Inc.*, 341 F.3d 1370, 1381-82 (Fed. Cir. 2003); *Integra Lifesciences I, Ltd. v. Merck KGaA*, 331 F.3d 860, 870 (Fed. Cir. 2003); *Grain Processing Corp. v. Am. Maize-Props. Co.*, 185 F.3d 1341, 1349 (Fed. Cir. 1999); *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1108-09 (Fed. Cir. 1996); *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995) (en banc); *Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 1065 (Fed. Cir. 1983).

Source: Federal Circuit Model Jury Instruction B.6.1 (as revised), Northern District of California Model Jury Instruction B.5.1 (as revised).

Synopsys' Objection and Brief Analysis – “Damages - Generally” Instruction

Synopsys seeks to add the paragraph in bold above. The second two sentences come almost verbatim from the Federal Circuit’s en banc decision in *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1550 (Fed. Cir. 1995) (en banc) (“Similarly, our subsequent cases have applied the entire market value rule only in situations in which the patented and unpatented components were analogous to a single functioning unit . . . Our precedent has not extended liability to include items that have essentially no functional relationship to the patented invention and that may have been sold with an infringing device only as a matter of convenience or business advantage.”). The first sentence provides case-specific context to these well-established legal principles.

There is no dispute that these statements are legally and factually correct. Therefore, presenting these correct statements to the jury will serve to inform the jury’s understanding of the case and applicable law and avoid a potential windfall to Mentor, which Federal Circuit jurisprudence seeks to avoid. *Id.* at 1550 (refusing to permit damages when they would “constitute more than what is ‘adequate to compensate for the infringement’”) (quoting 35 U.S.C. § 284).

L – S – ALL LOST PROFITS INSTRUCTIONS

Synopsys' Objection and Brief Analysis – All "Lost Profits" Instructions

Synopsys believes that the jury should not be instructed on lost profits at all because the natural implication of the Court's August 19, 2014 Order (Dkt. 589) is that Mentor may not seek lost profits. Although Synopsys requests the opportunity for further argument should the Court find it useful, following is a brief overview of Synopsys' position.

Synopsys moved for summary judgment on Mentor's lost profits claim on three independent grounds. (Dkt. 537). The first ground was that Mentor is required to apportion its lost profits damages between the patented and unpatented/non-infringing features of the emulator, and that it did not do so. (*Id.* at 2-6). Synopsys argued that this ground "affects all lost profits" and that "[b]ecause Mentor failed to address the [apportionment] issues above with respect to its lost profits claim, Mentor is not entitled to lost profits as a matter of law." (*Id.* at 2, 6).

In response, Mentor's sole position was that apportionment is unnecessary as a matter of law. (See Dkt. 554 at 25-29) ("Apportionment Is Not Required Under the Panduit Test"); ("Apportionment Is Not Required Under the [Entire Market Value Rule]"). Mentor did not dispute the impact of granting Synopsys' motion. Mentor also did not argue in the alternative that, even if apportionment is required, it has done so in this case. And Mentor did not rebut Synopsys' affirmative evidence that the entire market value rule does not apply because the accused features are functionally separate from the rest of the emulator. In other words, Mentor chose to stake its defense on a legal position, not a factual one.

The Court granted Synopsys' motion as to the first ground in its entirety. (Dkt. 589) ("As to the need to apportion lost profits according to demand generated by the patented and unpatented inventions, the motion is GRANTED."). Synopsys believes that the consequence of that order is that Mentor is now precluded from seeking any lost profits, for at least two reasons.

First, Synopsys' summary judgment motion shifted the burden to Mentor to come forward with "specific facts" showing a dispute for trial. *See T.W. Elec. Serv., Inc. v. Pac. Elec.*

Contractors Ass'n, 808 F.2d 626, 630 (9th Cir. 1987) (once the moving party meets its initial burden on summary judgment, the nonmoving party must set forth “specific facts showing that there is a genuine issue for trial”). Mentor did not meet its burden because it relied solely on a legal argument.

Second, Mentor cannot offer any evidence at trial to support an apportionment theory because it has never conducted or disclosed any such analysis. Mentor never disclosed its computation of damages in its initial disclosures, as required by Federal Rule of Civil Procedure 26(a)(1)(A)(iii). Mentor supplemented its initial disclosures, including as recently as June 4, 2014, yet still failed to identify its computation of damages, explaining only that it “may rely on expert testimony for the calculation of damages.”

When Synopsys served interrogatories in June 2013 asking Mentor to identify its claimed damages, “the amount of damages,” and Mentor’s “method of computation,” Mentor objected to the interrogatory as premature and said it called for expert testimony. Mentor never identified any damages analysis in its interrogatory responses, even when it supplemented its interrogatory response at the close of discovery. When Synopsys served a 30(b)(6) notice on Mentor requesting a witness to testify about Mentor’s claimed damages, including the “nature of the damages,” “amount of damages,” and “Mentor’s method of computation,” Mentor again objected that this called for expert testimony that was not yet due. Mentor’s designated witness on this topic, James Kenney, conceded at his deposition that he was “not prepared to discuss amount of damages [or] Mentor’s method for computation.”

Likewise, Mentor’s experts did not conduct any apportionment analysis. The reason is plain. Mentor believed such an analysis was unnecessary as a matter of law. Mentor did not conduct an alternative analysis and instead gambled on its legal position. Mentor lost. But having failed to disclose any apportionment theory during discovery, Mentor cannot pursue one at trial. *See Fed. R. Civ. P. 37(c)(1); see also Hoffman v. Constr. Protective Servs., Inc.*, 541 F.3d 1175, 1179 (9th Cir. 2008) (affirming district court’s order excluding undisclosed damages computations); *Oracle USA, Inc. v. SAP AG*, 264 F.R.D. 541 (N.D. Cal. 2009) (excluding

undisclosed lost profits theory where plaintiffs never supplemented their initial disclosures to identify their damages computations).

Accordingly, Synopsys does not believe the jury should be instructed on lost profits at all. However, if the Court does instruct the jury on lost profits, Synopsys has included objections and proposed instructions for lost profits.

L. LOST PROFITS—“BUT FOR” TEST

1. Mentor Graphics’ Proposed Instruction

In this case, Mentor Graphics seeks to recover lost profits for some of Synopsys’ sales of Synopsys’ emulation systems and a reasonable royalty on the rest of Synopsys’ sales.

To recover lost profits (as opposed to reasonable royalties), Mentor Graphics must show a causal relationship between the infringement and Mentor Graphics’ loss of profit. In other words, Mentor Graphics must show that, but for the infringement **by Synopsys**, there is a reasonable probability that Mentor Graphics would have earned higher profits. To show this, Mentor Graphics must prove that, if there had been no infringement, it would have made some portion of the sales that Synopsys made of the infringing product, and it would have sold more products that are functionally related to those products.

There are two ways Mentor Graphics can show it is entitled to lost profits in this case. First, it is entitled to recover lost profits if it establishes each of the following:

- (1) **That there was a demand for the patented product.**
- (2) That there were no available, acceptable, noninfringing substitute products. Or, if there were acceptable, noninfringing substitute products, Mentor Graphics must establish the number of the Synopsys’ sales that Mentor Graphics would have made (in terms of market share), despite the availability of other acceptable noninfringing substitutes.
- (3) That Mentor Graphics had the manufacturing and marketing capacity to make any infringing sales actually made by Synopsys and for which Mentor Graphics seeks an award of lost profits—in other words, that Mentor Graphics was capable of satisfying the demand.

(4) The amount of profit that Mentor Graphics would have made if Synopsys had not infringed.

Second, Mentor Graphics is entitled to lost profits based on the entire market value of a patented product with patented and unpatented features if Mentor Graphics has proven that:

- (1) **the unpatented features function together with the patented feature so as to produce a desired end product or result, are components of a single assembly, are parts of a complete machine, or constitute a single functional unit, and**
- (2) **the patent-related feature drove customer demand for Veloce emulators during the damages period.**

The unpatented components may be physically separate so long as they are normally sold with the patented components. If Mentor Graphics has not proven it is entitled to lost profits based on the entire market value, it is still entitled to lost profits based on the value of the infringing feature if it allocates or apportions profits attributable to the patented features of the infringing product from the unpatented features of that product.

Authorities

35 U.S.C. § 284; *Aro Mfg. Co. v. Convertible Top Co.*, 377 U.S. 476, 502-07 (1964); *Ericsson, Inc. v. Harris Corp.*, 352 F.3d 1369, 1377-79 (Fed. Cir. 2003); *Micro Chem., Inc. v. Lextron, Inc.*, 318 F.3d 1119, 1123 (Fed. Cir. 2003); *Gargoyles, Inc. v. United States*, 113 F.3d 1572, 1577-78 (Fed. Cir. 1997); *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995) (en banc); *BIC Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 1218-19 (Fed. Cir. 1993); *Carella v. Starlight Archery*, 804 F.2d 135, 141 (Fed. Cir. 1986); *Gyromat Corp. v. Champion*

Spark Plug Co., 735 F.2d 549, 552 (Fed. Cir. 1984); *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156 (6th Cir. 1978); *Grain Processing Corp. v. Am. Maize-Props. Co.*, 185 F.3d 1341, 1350 (Fed. Cir. 1999).

Source: Federal Circuit Bar Association Model Jury Instruction 6.2

Mentor Graphics' Objection and Brief Analysis – All “Lost Profits – ‘But For’ Test” Instruction

The parties' agreed-upon instruction lists four factors that Mentor Graphics must establish to show that it is entitled to lost profits, consistent with the Federal Circuit Bar Association's Model Jury Instruction 6.2. Synopsys' reference to the "hypothetical reconstruction of the market" is misleading because it suggests that the "hypothetical reconstruction of the market" is an additional factor that Mentor Graphics must establish.

Mentor Graphics does not interpret the Court's August 19, 2014 order (Dkt. 589) to dispose of lost profits. Rather, Mentor Graphics understands the order to state Mentor's burden of proof with respect to the entire market value rule, which requires a showing that the infringing feature is the basis for customer demand if a plaintiff is to avoid apportionment of lost profits among patented and unpatented features. The Court's order does not appear to address the *Panduit* test, which Synopsys's motion did not address and which does not under any reading of Federal Circuit precedent require apportionment. *See, e.g., DePuy Spine Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1330 (Fed. Cir. 2009).

Mentor Graphics' instruction explains that the *Panduit* test and the entire market value approach are two separate, alternative ways of calculating lost profits. *See, Versata Software, Inc. v. SAP America, Inc.*, 717 F.3d 1255, 1265 (Fed. Cir. 2013) (acknowledging the "wide variety of reconstruction theories" for proving lost profits). Synopsys' proposed instruction conflates the *Panduit* test and the entire market value approach, implying that apportionment and

evidence that patent-related feature is the basis of demand are two additional factors that must be proved under the *Panduit* test.

As explained with respect to proposed instruction “Lost Profits—Apportionment and the Entire Market Value Rule,” (Instruction II.Q) Mentor Graphics’ proposed instruction more accurately reflects the context of and legal requirements for the entire market value rule.

Mentor Graphics objects to Synopsys’ proposed instruction because it is redundant and confusing. The parties’ agreed-upon jury instructions, including, “Damages—Generally,” states “[Mentor Graphics] must prove [damages] with reasonable certainty[,]” and “[y]ou should not award damages that are remote or speculative” (Instruction II.K.), already address the issue of speculative damages.

2. Synopsys' Proposed Instruction [Instructions L-S should be included only if the Court instructs the jury on lost profits]

In this case, Mentor Graphics seeks to recover lost profits for some of Synopsys' sales of Synopsys' emulation systems and a reasonable royalty on the rest of Synopsys' sales.

To recover lost profits (as opposed to reasonable royalties), Mentor Graphics must show a causal relationship between the infringement and Mentor Graphics' loss of profit. In other words, Mentor Graphics must show that, but for the infringement, there is a reasonable probability that Mentor Graphics would have earned higher profits. To show this, Mentor Graphics must prove that, if there had been no infringement, it would have made some portion of the sales that Synopsys made of the infringing product, and it would have sold more products that are functionally related to those products.

Although to prove lost profits Mentor Graphics must make a hypothetical reconstruction of the market to project economic results that did not in fact occur, the hypothetical reconstruction may not be based on speculation. In other words, Mentor Graphics must present sound economic proof of the nature of the hypothetical market and what would have occurred if Synopsys were not in the market.

Mentor Graphics is entitled to lost profits if it establishes each of the following:

- (1) That there was a demand for the patented feature.
- (2) That there were no available, acceptable, noninfringing substitute products. Or, if there were acceptable, noninfringing substitute products, Mentor Graphics must establish the number of the Synopsys' sales that Mentor Graphics would have made (in terms of market share), despite the availability of other acceptable noninfringing substitutes.
- (3) That Mentor Graphics had the manufacturing and marketing capacity to make any infringing sales actually made by Synopsys and for which Mentor Graphics seeks an award of lost profits—in other words, that Mentor Graphics was capable of satisfying the demand.

(4) The amount of profit that Mentor Graphics would have made if Synopsys had not infringed.

Authorities

35 U.S.C. § 284; *Aro Mfg. Co. v. Convertible Top Co.*, 377 U.S. 476, 502-07 (1964); *Ericsson, Inc. v. Harris Corp.*, 352 F.3d 1369, 1377-79 (Fed. Cir. 2003); *Micro Chem., Inc. v. Lextron, Inc.*, 318 F.3d 1119, 1123 (Fed. Cir. 2003); *Gargoyles, Inc. v. United States*, 113 F.3d 1572, 1577-78 (Fed. Cir. 1997); *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995) (en banc); *BIC Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 1218-19 (Fed. Cir. 1993); *Carella v. Starlight Archery*, 804 F.2d 135, 141 (Fed. Cir. 1986); *Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 552 (Fed. Cir. 1984); *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156 (6th Cir. 1978); *Grain Processing Corp. v. Am. Maize-Props. Co.*, 185 F.3d 1341, 1350 (Fed. Cir. 1999).

Source: Federal Circuit Bar Association Model Jury Instruction 6.2.

Synopsys' Objection and Brief Analysis – All “Lost Profits – ‘But For’ Test” Instruction

Synopsys seeks to add the paragraph above in bold to provide additional guidance and instruction to the jury on the confusing concept of a hypothetical “but for” world. The language Synopsys proposes is directly from a leading Federal Circuit decision on lost profits and a case that is already cited in the authorities above. *See Grain Processing Corp. v. Am. Maize-Props. Co.*, 185 F.3d 1341, 1350 (Fed. Cir. 1999) (“Reconstructing the market, by definition a hypothetical enterprise, requires the patentee to project economic results that did not occur. To prevent the hypothetical from lapsing into pure speculation, this court requires sound economic proof of the nature of the market and likely outcomes with infringement factored out of the economic picture.”).

There is some risk of confusion for the jury in considering projected economic results in a hypothetical market. Jurors may be confused between something that is hypothetical and something that is speculative. This instruction helps avoid any error in application of this complex concept.

Synopsys also objects to Mentor's proposal to tell the jury that lost profits may be established through the entire market value rule (EMVR). Such an instruction is plain legal error. The EMVR is not a method of *establishing* lost profits, it is merely a "narrow exception" to the general rule that a patentee may not be compensated for non-infringing components. *See LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51 (Fed. Cir. 2012). In other words, if a patentee demonstrates it is entitled to damages, the EMVR is a second hurdle a patentee can try to satisfy to obtain damages for items which are normally outside the scope of patent damages. Indeed, this rule applies both to damages under lost profits or reasonable royalty. *See id.* Mentor's suggestion that it can show lost profits merely by showing that features function together and drive demand says nothing about whether it would have made any sales but for the infringement, whether it had capacity to make those sales, and what its profit would have been. Indeed, Mentor's expert never opined that Mentor is entitled to lost profits based on the EMVR; he only used the four factors in the first test then failed to do any apportionment of Mentor's claimed lost profits.

M. LOST PROFITS – DEMAND

1. Mentor Graphics’ Proposed Instruction

With respect to the first element of the first way of proving lost profits, demand for the patented product can be proven by (1) sales of the patented product, (2) sales of an infringing Synopsys emulation system, or (3) sales of a Mentor Graphics product that competes with an infringing Synopsys emulation system.

Authorities

Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1545 (Fed. Cir. 1995) (en banc); *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1330 (Fed. Cir. 2009); *Versata Software, Inc. v. SAP America, Inc.*, 717 F.3d 1255 (Fed. Circ. 2013).

Source: Federal Circuit Bar Association Model Jury Instruction 6.2.

Mentor Graphics’ Objection and Brief Analysis – All “Lost Profits – Demand” Instruction:

Synopsys’ proposed instruction on the *Panduit* “demand” factor injects requirements unsupported by Federal Circuit authority.

First, there is no requirement under *Panduit* for the sales to be “significant.” A patentee may show demand under *Panduit* even if it fails to make any actual sales during the damages period. *Versata Software, Inc. v. SAP America, Inc.*, 717 F.3d 1255, 1265 (Fed. Cir. 2013); *DePuy Spine Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1330 (Fed. Cir. 2009). In *Versata Software*, the Federal Circuit found that the patentee met the *Panduit* demand requirement even though it failed to make any actual sales during the damages period. 717 F.3d at 1265. *Panduit* simply requires that the patentee show that there is “demand for the patented product.” *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995).

Second, *Panduit* requires demand for “a product that is ‘covered by the patent in suit’ or

that ‘directly competes with the infringing device.’” *DePuy Spine, supra*, 567 F.3d at 1330. In *Depuy Spine*, defendant Medtronic challenged the jury’s lost profits award on the basis that “Depuy failed to show, under the first Panduit factor, that the demand for Depuy’s [products] was driven by the [patented feature].” 567 F.3d at 1329-30. Medtronic asked the Federal Circuit to hold that “the requisite demand under the first Panduit factor is demand for the specific feature (i.e., claim limitation) that distinguishes the patented product from a noninfringing substitute, not simply demand for the patented product.” Id. at 1330. The Federal Circuit declined, explaining that “[this] factor simply asks whether demand existed for the ‘patented product,’ i.e., a product that is ‘covered by the patent in suit’ **or that ‘directly competes with the infringing device.’”** *Id.* (emphasis added, quoting *Rite-Hite*, 56 F.3d at 1548-49).

The language of Synopsys’ instruction that requires “significant sales” of “an infringing product containing the patented features” is wrong.

2. Synopsys' Proposed Instruction

Demand for the patented product can be proven by **significant** sales of a **patent holder's** **patented product** or **significant** sales of an **infringing product containing the patented features**.

Authorities

DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc., 567 F.3d 1314, 1330 (Fed. Cir. 2009).

Source: Federal Circuit Bar Association Model Jury Instruction 6.2.

Synopsys' Objection and Brief Analysis – All “Lost Profits – Demand” Instruction

Synopsys proposes using the Federal Circuit Bar Association's model instruction verbatim and without change. Mentor wants to modify the instruction. Specifically, Mentor seeks to lower its burden by eliminating the term “significant” and by allowing evidence of sales of irrelevant products to meet this test. Mentor's instruction introduces language such as “Mentor Graphics product that competes with a Synopsys emulation system” that is vague and will confuse the jury. In addition, the model instruction directs the jury to consider only sales of an infringing product “containing the patented features.” Mentor removes this language, again trying to ignore that the law, the model instruction, and that the facts of this case revolves around only two accused features (i.e., flexible probes and value change probes) of entire emulation systems that are highly complex, multi-component and multi-feature systems.

**N. LOST PROFITS—NONINFRINGEMENT SUBSTITUTES—
ACCEPTABILITY**

With respect to the second requirement for lost profits, to be an “acceptable, noninfringing substitute,” a product must have the advantages of the patented invention that were important to customers who purchased Synopsys’ infringing emulation system. If purchasers of Synopsys’ emulation system were motivated to buy Synopsys’ emulation system primarily because of the accused features, then some other, alternative product is not an acceptable substitute, even if it otherwise competed with the Mentor Graphics’ and Synopsys’ emulation systems. On the other hand, if the realities of the marketplace are that competitors other than Mentor Graphics would likely have captured the sales made by Synopsys, despite a difference in the products, then Mentor Graphics is not entitled to lost profits on those sales.

Authorities

Am. Seating Co. v. USSC Group, 514 F.3d 1262, 1270 (Fed. Cir. 2008) (“[B]uyers must view the substitute as equivalent to the patented device.”); *Standard Havens Prods., Inc. v. Gencor Indus.*, 953 F.2d 1360, 1373 (Fed. Cir. 1991); *SmithKline Diagnostics, Inc. v. Helena Lab. Corp.*, 926 F.2d 1161, 1166 (Fed. Cir. 1991)).

Source: Federal Circuit Bar Association Model Jury Instruction 6.2.

O. LOST PROFITS—CAPACITY

With respect to the third requirement for lost profits, a patent holder is only entitled to lost profits for sales it could have made. In other words, Mentor Graphics must show that it had the manufacturing and marketing capability to make the sales it said it lost: Mentor Graphics must show it is more probable than not that it could have made and sold, or could have had someone else make or sell for it, the additional products it says it could have sold but for the infringement.

Authorities

Fonar Corp. v. Gen. Elec. Co., 107 F.3d 1543, 1553 (Fed. Cir. 1997) (finding that the patent holder, a young company, would have expanded to meet the increased demand created by the success of the patented product); *Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 554 (Fed. Cir. 1984).

Source: Federal Circuit Bar Association Model Jury Instruction 6.2.

P. LOST PROFITS—AMOUNT OF PROFIT

With respect to the fourth requirement for lost profits, Mentor Graphics may calculate its lost profits on lost sales by computing the lost revenue for sales it has proven it would have made but for the infringement and subtracting from that figure the amount of additional costs or expenses it would have incurred in making those lost sales, such as cost of goods, sales costs, packaging costs, and shipping costs. Certain fixed costs that do not vary with increases in production or scale, such as taxes, insurance, rent, and administrative overhead, should not be subtracted from a patent holder's lost revenue.

Authorities

Paper Converting Mach. Co. v. Magna-Graphics Corp., 745 F.2d 11 (Fed. Cir. 1984).

Source: Federal Circuit Bar Association Model Jury Instruction 6.2

Q. LOST PROFITS—APPORTIONMENT

1. Mentor Graphics’ Objection and Brief Analysis

Synopsys’ proposed instruction is unnecessary in view of Mentor Graphics’ proposed instructions on the entire market value rule in the instruction on “Lost Profits—‘But For’ Test” (Instruction II.L). The disputed instruction is not part of any model jury instruction. It is also legally incorrect for the reasons set forth in Mentor Graphics’ objections to “Lost Profits—Demand” (Instruction II.M.) and “Lost Profits—But For Test” (Instruction II.I.) above.

Mentor Graphics’ proposed instruction “Lost Profits—‘But For’ Test” (Instruction II.L) more accurately reflects the context of and legal requirements for the entire market value rule, and incorporates the Court’s language from its August 19, 2014 order (Dkt. 589).

2. Synopsys' Proposed Instruction

Mentor Graphics must give evidence to separate or apportion Synopsys' profits and Mentor Graphics' damages between the patented features and the unpatented features of the emulators at issue. Unpatented components should not be included in a damages computation unless the patentee can show that they are functionally dependent on each other. I will address this more when I instruct you regarding collateral sales.

Authorities

Mentor Graphics Corp. v. EVE-USA, Inc., No. 3:10-cv-00954-MO (Lead) (D. Or. Aug. 19, 2014), Dkt. No. 589 (granting Synopsys' motion for summary judgment that Mentor must apportion lost profits and has failed to do so); *Garretson v. Clark*, 111 U.S. 120, 121-22 (1884); *Ferguson Beauregard v. Mega Sys.*, 350 F.3d 1327 (Fed. Cir. 2003); *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538 (Fed. Cir. 1995) (en banc).

Synopsys' Objection and Brief Analysis – “Lost Profits – Apportionment” Instruction

The Court granted Synopsys' motion for summary judgment that Mentor was required to apportion its lost profits but failed to do so. (Dkt. 589). This instruction applies that ruling and clarifies the jury's task in evaluating lost profits. This instruction derives directly from case law. *Garretson v. Clark*, 111 U.S. 120, 121-22 (1884) (The patentee “must in every case give evidence tending to separate or apportion the defendant's profits and the patentee's damages between the patented feature and the unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative” (quoting lower court with approval); *Ferguson Beauregard v. Mega Sys.*, 350 F.3d 1327 (Fed. Cir. 2003) (“The district court therefore failed to distinguish the allocation of profits that would have been made ‘but for’ the infringement of the '376 patent with the profits that could fairly be allocated to customer demand related to the features embodying the [non-infringing] '991 patent; *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538 (Fed. Cir. 1995) (en banc) (“[D]amages for component parts used with a patented apparatus were recoverable under the entire market value rule if the patented apparatus was of such paramount

importance that it substantially created the value of the component parts"); (recovery for unpatented components is only allowed where "the unpatented and patented components together were considered to be components of a single assembly or parts of a complete machine, or they together constituted a functional unit.").

R. LOST PROFITS—MARKET SHARE

If Mentor Graphics establishes it would have made some, but not all, of Synopsys' sales but for the infringement, the amount of sales that Mentor Graphics lost may be shown by proving Mentor Graphics' share of the relevant market, excluding infringing products. Mentor Graphics may be awarded a share of profits equal to its market share even if there were noninfringing substitutes available. In determining Mentor Graphics' market share, the market must be established first, which requires determining which products are in that market. Products are considered in the same market if they are considered "sufficiently similar" to compete against each other. Two products are sufficiently similar if one does not have a significantly higher price than, or possess characteristics significantly different from, the other.

Authorities

State Indus., Inc. v. Mor-Flo Indus., Inc., 883 F.2d 1573, 1557 (Fed. Cir. 1989); *BIC Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 1218-19 (Fed. Cir. 1993); *Micro Chem., Inc. v. Lextron, Inc.*, 318 F.3d 1119, 1124 (Fed. Cir. 2003); *Crystal Semiconductor Corp. v. Tritech Microelectronics Int'l, Inc.*, 246 F.3d 1336, 1354-55 (Fed. Cir. 2001).

Source: Federal Circuit Model Jury Instruction B.6.2 (as revised).

S. LOST PROFITS—COLLATERAL SALES

1. Mentor Graphics' Proposed Instruction

In this case, Mentor Graphics is seeking lost profits from sales of service agreements, which Mentor Graphics contends it would have sold along with its emulation system that competes with Synopsys' infringing emulation systems. These service agreements sold with Mentor Graphics' emulation systems are called collateral products.

To recover lost profits on sales of such collateral products, Mentor Graphics must establish two things. First, Mentor Graphics must establish it is more likely than not that Mentor Graphics would have sold the collateral products (the service agreements) but for the infringement. **Second, Mentor Graphics must establish that the collateral products and competitive products are normally sold together—that is, the service agreements typically are not sold separately from Mentor Graphics' emulation systems.**

Authorities

Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1550 (Fed. Cir. 1995) (en banc) (denying recovery for lost profits on collateral sales where nonpatented product lacked a functional relationship to the patented product); *see also State Indus., Inc. v. Mar-Flo Indus., Inc.*, 883 F.2d 1573, 1580 (Fed. Cir. 1989); *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1157-58 (6th Cir. 1978).

Source: Federal Circuit Model Jury Instruction B.6.3 (as revised); *United Ristvedt-Johnson, Inc. v. Brandt, Inc.*, 805 F. Supp. 557, 565 (N.D. Ill. 1992); *Kori Corp. v. Wilco Marsh Buggies & Draglines, Inc.*, 761 F.2d 649, 656 (Fed. Cir. 1985).

Mentor Graphics' Objection and Brief Analysis – “Lost Profits – Collateral Sales” Instruction:

Mentor Graphics' proposed instruction is preferable because it is based on precedent that specifically addresses service contracts, the same type of collateral products at issue in this case.

United Ristvedt-Johnson, Inc. v. Brandt, Inc., 805 F. Supp. 557, 565 (N.D. Ill. 1992) (citing *Kori Corp. v. Wilco Marsh Buggies & Draglines, Inc.*, 761 F.2d 649, 656 (Fed. Cir. 1985)). In *United Ristvedt-Johnson*, the court held that maintenance and repair contracts for the infringing products should be included in the lost profits award because the patentee “can normally anticipate the sale of the unpatented components together with the patented components.” 805 F. Supp. 557, 565. Synopsys' instructions rely on cases with significantly different underlying facts. In *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538 (Fed. Cir. 1995), the alleged collateral products were unpatented dock levelers, a bridging platform sold with the patented truck restraints and used to bridge the edges of a vehicle and dock. *Id.* at 1543.

2. Synopsys' Proposed Instruction

In this case, Mentor Graphics is seeking lost profits from sales of service agreements, which Mentor Graphics contends it would have sold along with its emulation system that competes with Synopsys' infringing emulation systems. These service agreements sold with Mentor Graphics' emulation systems are called collateral products.

To recover lost profits on sales of such collateral products, Mentor Graphics must establish two things. First, Mentor Graphics must establish it is more likely than not that Mentor Graphics would have sold the collateral products (the service agreements) but for the infringement. Second, **a collateral product and the competitive product together must be like components of a single assembly or parts of a complete machine, or, in other words, they must constitute a single functional unit.**

Recovery for lost profits on sales of collateral products must not include items that essentially have no functional relationship to the competitive product and that have been sold with the competitive product only as a matter of convenience or business advantage. You may not award patent damages for sales of items or services that are neither competitive with nor function with the patented invention.

Authorities

Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1550 (Fed. Cir. 1995) (en banc) (denying recovery for lost profits on collateral sales where nonpatented product lacked a functional relationship to the patented product); *see also State Indus., Inc. v. Mar-Flo Indus., Inc.*, 883 F.2d 1573, 1580 (Fed. Cir. 1989); *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1157-58 (6th Cir. 1978).

Source: Federal Circuit Model Jury Instruction B.6.3 (as revised).

Synopsys' Objection and Brief Analysis – “Lost Profits – Collateral Sales” Instruction

Synopsys proposes using the model instruction from the Federal Circuit Bar Association nearly verbatim and in its entirety. Mentor proposes deviating from the instruction based on a

1992 district court decision from Illinois and a 1985 Federal Circuit decision. *See United Ristvedt Johnson, Inc. v. Brands, Inc.*, 805 F. Supp. 557, 565 (N.D. Ill. 1992); *Kori Corp. v. Wilco Marsh Buggies & Draglines, Inc.*, 761 F.2d 649, 656 (Fed. Cir. 1985). Synopsys objects to Mentor's proposal.

The primary issue is when a patentee may recover damages for unpatented features or products. Mentor argues that such damages are appropriate when a patented product and unpatented product are merely "sold together." The controlling case law, articulated by the Federal Circuit sitting *en banc* 10 years after the decision Mentor cites, applies the standard in the model instruction – namely, that the entire market value rule applies "only in situations in which the patented and unpatented components were analogous to a single functioning unit." *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1550 (Fed. Cir. 1995) (*en banc*). In reviewing prior case law, the Federal Circuit further stated that "[o]ur precedent has not extended liability to include items that have essentially no functional relationship to the patented invention and that ***may have been sold with an infringing device only as a matter of convenience or business advantage.***" *Id.* at 1550 (emphasis added). The Federal Circuit's *en banc* decision in *Rite-Hite* cites the applicable standard and expressly rejects that a patentee may recover damages for items sold "only as a matter of convenience or business advantage," *id.*, as Mentor now proposes.

T. REASONABLE ROYALTY—GENERALLY

If you find that Mentor Graphics has established infringement of the Mentor Graphic patent, Mentor Graphics is entitled to at least a reasonable royalty to compensate it for that infringement. If you find that Mentor Graphics has not proved its claim for lost profits, or has proved its claim for lost profits for only a portion of the infringing sales, then you must award Mentor Graphics a reasonable royalty for all infringing sales for which it has not been awarded lost profits damages.

Authorities

35 U.S.C. § 284; *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1340 (Fed. Cir. 2009) (vacating and remanding jury award as excessive); *Crystal Semiconductor Corp. v. Tritech Microelectronics Int'l, Inc.*, 246 F.3d 1336 (Fed. Cir. 2001); *Fromson v. W. Litho Plate & Supply Co.*, 853 F.2d 1568, 1574 (Fed. Cir. 1998); *Minco, Inc. v. Combustion Eng'g, Inc.*, 95 F.3d 1109, 1119-20 (Fed. Cir. 1996); *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1579 (Fed. Cir. 1996); *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1554 (Fed. Cir. 1995) (en banc).

Source: Federal Circuit Model Jury Instruction B.6.5 (as revised).

U. REASONABLE ROYALTY—DEFINITION

1. Mentor Graphics' Proposed Instruction

A royalty is a payment made to a patent holder in exchange for the right to make, use, or sell the claimed invention. A reasonable royalty is the amount of royalty payment that a patent holder and the infringer would have agreed to in a hypothetical negotiation taking place at a time prior to when the infringement first began. **In considering this hypothetical negotiation, you should focus on what Mentor Graphics' and Synopsys' expectations would have been had they had entered into an agreement when infringement first began, and had they acted reasonably in their negotiations. In determining this, you must assume that both parties believed the patent was infringed and that Mentor Graphics and Synopsys were willing to enter into an agreement. The reasonable royalty you determine must be a royalty that would have resulted from the hypothetical negotiation, and not simply a royalty either party would have preferred. Evidence of things that happened after the infringement first began can be considered in evaluating the reasonable royalty only to the extent that the evidence aids in assessing what royalty would have resulted from a hypothetical negotiation. Although evidence of the actual profits Synopsys made may be used to determine the anticipated profits at the time of the hypothetical negotiation, the royalty may not be limited or increased based on the actual profits that Synopsys made.**

Authorities

Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292 (Fed. Cir. 2011) (25% “rule of thumb” inadmissible); *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860 (Fed. Cir. 2010) (per curiam) (licenses must be related to patent at issue to be relevant to a reasonable royalty); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1340 (Fed. Cir. 2009) *cert. denied*, 130 S. Ct. 3324 (2010) (vacating and rewarding jury award as excessive); *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355

F.3d 1327, 1338 (Fed. Cir. 2004); *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1108-10 (Fed. Cir. 1996); *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1579-81 (Fed. Cir. 1996); *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1554 (Fed. Cir. 1995) (en banc); *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970); United States Court of Appeals Fifth Judicial Circuit Pattern Jury Instructions, Instructions 9.8 (1999); *Interactive Pictures Corp. v. Infinite Pictures, Inc.*, 274 F.3d 1371 (Fed. Cir. 2001); *Trans-World Mfg. Corp. v. Al Nyman & Sons, Inc.*, 750 F.2d 1552 (Fed. Cir. 1984).

Source: Federal Circuit Model Jury Instruction B.6.6 (as revised).

Mentor Graphics' Objection and Brief Analysis – “Reasonable Royalty - Definition” Instruction:

Mentor Graphics objects to Synopsys' proposed instruction, which refers to “EVE” or “EVE and/or Synopsys,” and, contrary to its own damages expert’s opinion, asserts that the hypothetical negotiation would have taken place in 2006 between EVE and Mentor. Synopsys' instruction is also legally incorrect.

Synopsys' damages expert, George Strong, and Mentor Graphics agree that the hypothetical negotiation would have taken place in October 2012, between Synopsys and Mentor Graphics. The date of the hypothetical negotiation is the date that the infringement began. *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1123 (S.D.N.Y. 1970). If the infringement arises upon the accused infringer’s termination of a license for the asserted patent, the date of the hypothetical negotiation is the date the license terminated—not the date the license was initially established. *Tights, Inc. v. Kayser-Roth Corp.*, 442 F. Supp. 159, 165 (M.D.N.C. 1977) (holding that the hypothetical negotiation would have occurred on the date the license terminated); *See also Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, IP 96-1718-C-H/K, 2002 WL 1801525 (S.D. Ind. July 5, 2002) *aff’d in part, rev’d in part and remanded*, 381

F.3d 1371 (Fed. Cir. 2004) (both parties' experts opined that the hypothetical negotiation would have occurred around the time of the defendants' acquisition, which terminated a previous license agreement).

Before October 2012, EVE-USA, Inc. had a nontransferable, non-assignable license from Mentor Graphics to practice the '376 patent. On October 4, 2012, Synopsys acquired EVE-USA, Inc., terminating the license between EVE-USA, Inc. and Mentor Graphics. Thus, infringement began in October 4, 2012 when Synopsys (including EVE-USA, Inc.) began infringing the '376 patent by practicing the '376 patent without a valid license from Mentor Graphics. Accordingly, Mr. Strong concluded that “[t]he prior settlement agreement for the '376, '176 and '531 Patents allegedly terminated upon acquisition of EVE by Synopsys and therefore, the hypothetical negotiation for these Patents between Mentor Graphics and Synopsys would occur in October 2012.” (Expert Report of George G. Strong dated May 21, 2014, pg. 42.)

The hypothetical negotiation would not have taken place in 2006 as Synopsys now contends. In fact, EVE-USA, Inc. began producing the accused emulation systems in 2009. Nor would the hypothetical negotiation have been between EVE and Mentor Graphics. EVE refers to both EVE-USA, Inc. and Synopsys Emulation and Verification S.A. (*See* Instruction I.B, “Claims and Defenses.”) But Synopsys Emulation and Verification S.A. did not exist until after Synopsys, Inc. acquired EVE-USA, Inc. in October 2012, and EVE-USA, Inc. was licensed to practice the '376 patent until it was acquired by Synopsys, Inc. Infringement began after Synopsys, Inc. acquired EVE-USA, Inc. Any hypothetical negotiation would be between Mentor Graphics and the accused infringers, Synopsys, Inc., Synopsys Verification and Emulation S.A., and (post-acquisition) EVE-USA, Inc., collectively referred to as “Synopsys.”

To the extent the date of the hypothetical negotiation remains in dispute, the Court should select Mentor Graphics' proposed instruction because it encompasses both Mentor Graphics' and Synopsys' theory of damages. Mentor Graphics' proposed instruction does not specify the date of the hypothetical negotiation and refers to all accused infringers collectively as "Synopsys." Unlike Synopsys' instruction, Mentor Graphics' instruction does not state that the hypothetical negotiation should have taken place in 2006. Nor does Mentor Graphics' instruction imply that the hypothetical negotiation should have taken place between Mentor Graphics and EVE.

2. Synopsys' Proposed Instruction

A royalty is a payment made to a patent holder in exchange for the right to make, use, or sell the claimed invention. A reasonable royalty is the amount of royalty payment that a patent holder and the infringer would have agreed to in a hypothetical negotiation taking place at a time prior to when the infringement first began. In considering this hypothetical negotiation, you should focus on what Mentor Graphics' and **EVE's** expectations would have been had they had entered into an agreement when infringement first began, **in 2006**, and had they acted reasonably in their negotiations. In determining this, you must assume that both parties believed the patent was infringed and that Mentor Graphics and **EVE** were willing to enter into an agreement. The reasonable royalty you determine must be a royalty that would have resulted from the hypothetical negotiation, and not simply a royalty either party would have preferred. Evidence of things that happened after the infringement first began can be considered in evaluating the reasonable royalty only to the extent that the evidence aids in assessing what royalty would have resulted from a hypothetical negotiation. Although evidence of the actual profits **EVE and/or** Synopsys made may be used to determine the anticipated profits at the time of the hypothetical negotiation, the royalty may not be limited or increased based on the actual profits that **EVE and/or** Synopsys made.

Authorities

Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292 (Fed. Cir. 2011) (25% “rule of thumb” inadmissible); *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860 (Fed. Cir. 2010) (per curiam) (licenses must be related to patent at issue to be relevant to a reasonable royalty); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1340 (Fed. Cir. 2009) *cert. denied*, 130 S. Ct. 3324 (2010) (vacating and rewarding jury award as excessive); *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1338 (Fed. Cir. 2004); *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1108-10 (Fed. Cir. 1996); *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1579-81 (Fed. Cir. 1996); *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1554 (Fed. Cir. 1995) (en banc); *Georgia-Pacific Corp. v. U.S.*

Plywood Corp., 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970); United States Court of Appeals Fifth Judicial Circuit Pattern Jury Instructions, Instructions 9.8 (1999); *Interactive Pictures Corp. v. Infinite Pictures, Inc.*, 274 F.3d 1371 (Fed. Cir. 2001); *Trans-World Mfg. Corp. v. Al Nyman & Sons, Inc.*, 750 F.2d 1552 (Fed. Cir. 1984).

Source: Federal Circuit Model Jury Instruction B.6.6 (as revised).

Synopsys' Objection and Brief Analysis – “Reasonable Royalty - Definition” Instruction

The parties’ dispute with respect to this reasonable royalty instruction relates to when the hypothetical negotiation would have occurred and who the parties to the negotiation would be. There is no dispute that, for purposes of a reasonable royalty analysis, the hypothetical negotiation must be deemed to occur at “the date of first infringement.” *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 75 (Fed. Cir. 2012). Determining this date is “essential for properly assessing damages.” *Id.* (citations omitted). The Federal Circuit has also directed that courts should use “only a single hypothetical negotiation date, not separate dates for separate acts of infringement.” *Id.* at 76.

Here, Mentor’s expert assigns separate hypothetical negotiation dates to separate acts of infringement, in contravention of the Federal Circuit’s guidance. The earliest hypothetical negotiation date Mentor’s expert uses is June 15, 2006, the date that EVE introduced ZeBu-XXL, which Mentor accuses of infringement in this action. Rather than assuming that Mentor and EVE would have undertaken separate, serial negotiations, it is reasonable to assume that they would have engaged in one negotiation that would have covered all asserted patents and all accused products. *See Jarosz & Chapman, The Hypothetical Negotiation and Reasonable Royalty Damages: the Tail Wagging the Dog*, 16 STAN. TECH. L. REV. 769, 807 (2013) (“[E]xperts and courts often bundle such products (or processes) together for negotiation purposes, assuming that all subsequent infringements would be subsumed in a single negotiation.”) (citing *Accentra, Inc. v. Staples, Inc.*, No. 07-5862 ABC, 2011 U.S. Dist. LEXIS 154692, at *58-61 (C.D. Cal. Dec. 19, 2011), *aff’d in part and rev’d in part* by 500 F. App’x 922 (Fed. Cir. 2013)).

Mentor contends that the date of first infringement should be October 4, 2012, after Synopsys acquired EVE, such that the negotiation should be with EVE. But this erroneously assumes that EVE and Mentor would not simply have negotiated in June 15, 2006 for a broad license, something that Mentor's expert agrees would have happened at least for the '882 patent. Such a negotiation could contemplate compensation for making the license transferrable, such that Synopsys would continue to be a licensee following its acquisition of EVE.

V. REASONABLE ROYALTY—RELEVANT FACTORS

1. Mentor Graphics' Proposed Instruction

In determining the reasonable royalty, you should consider all the facts known and available to the parties at the time the infringement began. Some of the kinds of factors that you may consider in making your determination are:

- (1) The royalties received by Mentor Graphics for the licensing of the '376 patent, proving or tending to prove an established royalty.
- (2) **The rates paid by Synopsys for the use of other patents comparable to the '376 patent.**
- (3) The nature and scope of the license, as exclusive or nonexclusive, or as restricted or nonrestricted in terms of territory or with respect to whom the manufactured product may be sold.
- (4) Mentor Graphics' established policy and marketing program to maintain its patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.
- (5) **The commercial relationship between Mentor Graphics and Synopsys, such as whether they are competitors in the same territory in the same line of business, or whether they are inventor and promoter.**
- (6) The effect of selling the patented feature in promoting sales of other Synopsys products, the existing value of the invention to Mentor Graphics as a generator of sales of its nonpatented items, and the extent of such derivative or collateral sales.
- (7) The duration of the '376 patent and the term of the license.
- (8) **The established profitability of Synopsys' and Mentor Graphics' products covered by the '376 patent, their commercial success, and current popularity.**

- (9) The utility and advantages of the patented feature over the old modes or devices, if any, that had been used for working out similar results.
- (10) The nature of the patented invention, the character of the commercial embodiment of it as owned and produced by the licensor, and the benefits to those who have used the invention.
- (11) **The extent to which Synopsys has made use of Mentor Graphics' invention and any evidence probative of the value of that use.**
- (12) The portion of the profit or of the selling price that may be customary in the particular business or in comparable business to allow for the use of the invention or analogous inventions.
- (13) **The portion of the realizable profits that should be credited to Mentor Graphics' invention as distinguished from nonpatented elements, the manufacturing process, business risks, or significant features or improvements added by Synopsys.**
- (14) The opinion and testimony of qualified experts.
- (15) The amount that a licensor, such as Mentor Graphics, and a licensee, such as the Synopsys, would have agreed upon at the time the infringement began if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee—who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

No one factor is dispositive and you can and should consider the evidence that has been presented to you in this case on each of these factors. You may also consider any other factors which in your mind would have increased or decreased the royalty Synopsys would have been willing to pay and Mentor Graphics would have been willing to accept, acting as normally prudent business people. The final factor establishes the framework which you should use in determining a reasonable royalty, that is, the payment that would have resulted from a negotiation between Mentor Graphics and Synopsys taking before Synopsys' alleged infringement began.

Authorities

These are the so-called "*Georgia-Pacific*" factors, which can be considered in evaluating the hypothetical negotiations. Although lengthy, the Committee believes it is necessary for all factors to be shared with the jury, so as to not unfairly emphasize any one factor. *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292 (Fed. Cir. 2011) (25% "rule of thumb" inadmissible); *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860 (Fed. Cir. 2010) (per curiam) (licenses must be related to patent at issue to be relevant to a reasonable royalty); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1340 (Fed. Cir. 2009), cert. denied, 130 S. Ct. 3324 (2010) (vacating and rewarding jury award as excessive); *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1338 (Fed. Cir. 2004); *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1108-10 (Fed. Cir. 1996); *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1579-81 (Fed. Cir. 1996); *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1554 (Fed. Cir. 1995) (en banc); *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970); Fifth Circuit Pattern Jury Instructions, Instructions 9.8 (2006), www.1b5.uscourts.gov/juryinstructions.

Source: Federal Circuit Model Jury Instruction B.6.7 (as revised).

Mentor Graphics' Objection and Brief Analysis – “Reasonable Royalty – Relevant Factors” Instruction:

As discussed with respect to the proposed instruction “Reasonable Royalty—Definition” (Instruction II.U), Mentor Graphics objects to Synopsys’ reference to “EVE” or “EVE and/or Synopsys” because it implies the hypothetical negotiation would have taken place between Mentor Graphics and EVE. The hypothetical negotiation would have taken place between Mentor Graphics and Synopsys in October 2012, after Synopsys, Inc. acquired EVE, terminating EVE’s license to the ’376 patent.

To the extent the parties to the hypothetical negotiation remains in dispute, the Court should adopt Mentor Graphics’ instruction, which encompasses both Mentor Graphics’ and Synopsys theory of damages. Mentor Graphics’ proposed instruction refers to the hypothetical negotiation with any the accused infringers, referred to collectively as “Synopsys.” Unlike Synopsys’ instruction, Mentor Graphics’ instruction does not imply that the hypothetical negotiation should have taken place between Mentor Graphics and EVE.

2. Synopsys' Proposed Instruction

In determining the reasonable royalty, you should consider all the facts known and available to the parties at the time the infringement began. Some of the kinds of factors that you may consider in making your determination are:

- (1) The royalties received by Mentor Graphics for the licensing of the '376 patent, proving or tending to prove an established royalty.
- (2) The rates paid by Synopsys **and/or EVE** for the use of other patents comparable to the '376 patent.
- (3) The nature and scope of the license, as exclusive or nonexclusive, or as restricted or nonrestricted in terms of territory or with respect to whom the manufactured product may be sold.
- (4) Mentor Graphics' established policy and marketing program to maintain its patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.
- (5) The commercial relationship between Mentor Graphics and **EVE**, such as whether they are competitors in the same territory in the same line of business, or whether they are inventor and promoter.
- (6) The effect of selling the patented feature in promoting sales of other Synopsys products, the existing value of the invention to Mentor Graphics as a generator of sales of its nonpatented items, and the extent of such derivative or collateral sales.
- (7) The duration of the '376 patent and the term of the license.
- (8) The established profitability of **EVE's** and Mentor Graphics' products covered by the '376 patent, their commercial success, and current popularity.
- (9) The utility and advantages of the patented feature over the old modes or devices, if any, that had been used for working out similar results.

- (10) The nature of the patented invention, the character of the commercial embodiment of it as owned and produced by the licensor, and the benefits to those who have used the invention.
- (11) The extent to which EVE and/or Synopsys has made use of Mentor Graphics' invention and any evidence probative of the value of that use.
- (12) The portion of the profit or of the selling price that may be customary in the particular business or in comparable business to allow for the use of the invention or analogous inventions.
- (13) The portion of the realizable profits that should be credited to Mentor Graphics' invention as distinguished from nonpatented elements, the manufacturing process, business risks, or significant features or improvements added by EVE and/or Synopsys.
- (14) The opinion and testimony of qualified experts.
- (15) The amount that a licensor, such as Mentor Graphics, and a licensee, such as the Synopsys, would have agreed upon at the time the infringement began if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee—who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

No one factor is dispositive and you can and should consider the evidence that has been presented to you in this case on each of these factors. You may also consider any other factors which in your mind would have increased or decreased the royalty Synopsys would have been willing to pay and Mentor Graphics would have been willing to accept, acting as normally prudent business people. The final factor establishes the framework which you should use in determining a reasonable royalty, that is, the payment that would have resulted from a

negotiation between Mentor Graphics and Synopsys taking before Synopsys' alleged infringement began.

Authorities

These are the so-called "*Georgia-Pacific*" factors, which can be considered in evaluating the hypothetical negotiations. Although lengthy, the Committee believes it is necessary for all factors to be shared with the jury, so as to not unfairly emphasize any one factor. *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292 (Fed. Cir. 2011) (25% "rule of thumb" inadmissible); *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860 (Fed. Cir. 2010) (per curiam) (licenses must be related to patent at issue to be relevant to a reasonable royalty); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1340 (Fed. Cir. 2009), cert. denied, 130 S. Ct. 3324 (2010) (vacating and rewarding jury award as excessive); *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1338 (Fed. Cir. 2004); *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1108-10 (Fed. Cir. 1996); *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1579-81 (Fed. Cir. 1996); *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1554 (Fed. Cir. 1995) (en banc); *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970); Fifth Circuit Pattern Jury Instructions, Instructions 9.8 (2006), www.1b5.uscourts.gov/juryinstructions.

Source: Federal Circuit Model Jury Instruction B.6.7 (as revised).

Synopsys' Objection and Brief Analysis – "Reasonable Royalty – Relevant Factors" Instruction

The parties' dispute with respect to this reasonable royalty instruction relates to when the hypothetical negotiation would have occurred and who the parties to the negotiation would be. There is no dispute that, for purposes of a reasonable royalty analysis, the hypothetical negotiation must be deemed to occur at "the date of first infringement." *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 75 (Fed. Cir. 2012). Determining this date is "essential for properly assessing damages." *Id.* (citations omitted). The Federal Circuit has also directed that courts should use "only a single hypothetical negotiation date, not separate dates for separate acts of infringement." *Id.* at 76.

Here, Mentor's expert assigns separate hypothetical negotiation dates to separate acts of infringement, in contravention of the Federal Circuit's guidance. The earliest hypothetical negotiation date Mentor's expert uses is June 15, 2006, the date that EVE introduced ZeBu-XXL, which Mentor accuses of infringement in this action. Rather than assuming that Mentor and EVE would have undertaken separate, serial negotiations, it is reasonable to assume that they would have engaged in one negotiation that would have covered all asserted patents and all accused products. *See Jarosz & Chapman, The Hypothetical Negotiation and Reasonable Royalty Damages: the Tail Wagging the Dog*, 16 STAN. TECH. L. REV. 769, 807 (2013) ("[E]xperts and courts often bundle such products (or processes) together for negotiation purposes, assuming that all subsequent infringements would be subsumed in a single negotiation.") (citing *Accentra, Inc. v. Staples, Inc.*, No. 07-5862 ABC, 2011 U.S. Dist. LEXIS 154692, at *58-61 (C.D. Cal. Dec. 19, 2011), *aff'd in part and rev'd in part* by 500 F. App'x 922 (Fed. Cir. 2013)).

Mentor contends that the date of first infringement should be October 4, 2012, after Synopsys acquired EVE, such that the negotiation should be with EVE. But this erroneously assumes that EVE and Mentor would not simply have negotiated in June 15, 2006 for a broad license, something that Mentor's expert agrees would have happened at least for the '882 patent. Such a negotiation could contemplate compensation for making the license transferrable, such that Synopsys would continue to be a licensee following its acquisition of EVE.

W. DATE OF COMMENCEMENT OF DAMAGES—PRODUCTS

In determining the amount of Mentor Graphics' damages, you should assume that damages begin on October 4, 2012.

Authorities

35 U.S.C. § 287; *Crystal Semiconductor Corp. v. Tritech Microelectronics Int'l, Inc.*, 246 F.3d 1336 (Fed. Cir. 2001); *Nike Inc. v. Wal-Mart Stores*, 138 F.3d 1437, 1443-44 (Fed. Cir. 1998); *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1108-09 (Fed. Cir. 1996); *Am. Med. Sys. v. Med. Eng'g Corp.*, 6 F.3d 1523, 1534 (Fed. Cir. 1993); *Devices for Med., Inc. v. Boehl*, 822 F.2d 1062, 1066 (Fed. Cir. 1987).

Source: Federal Circuit Model Jury Instruction B.6.8 (as revised).

III. GLOSSARY

Some of the terms in this glossary will be defined in more detail in the legal instructions you are given. The definitions in the instructions must be followed and must control your deliberations.

Abstract: A brief summary of the technical disclosure in a patent to enable the U.S. Patent and Trademark Office and the public to determine quickly the nature and gist of the technical disclosure in the patent.

Amendment: A patent applicant's change to one or more claims or to the specification either in response to an office action taken by an Examiner or independently by the patent applicant during the patent application examination process.

Assignment: A transfer of patent rights to another called an "assignee" who, upon transfer, becomes the owner of the rights assigned.

Claim: Each claim of a patent is a concise, formal definition of an invention and appears at the end of the specification in a separately numbered paragraph. In concept, a patent claim marks the boundaries of the patent in the same way that a legal description in a deed specifies the boundaries of land, i.e., similar to a landowner who can prevent others from trespassing on the bounded property, the inventor can prevent others from using what is claimed. Claims may be independent or dependent. An independent claim stands alone. A dependent claim does not stand alone and refers to one or more other claims. A dependent claim incorporates whatever the other referenced claim or claims say.

Drawings: The drawings are visual representations of the claimed invention contained in a patent application and issued patent, and usually include several figures illustrating various aspects of the claimed invention.

Elements: The required parts of a device or the required steps of a method. A device or method infringes a patent if it contains each and every requirement of a patent claim.

Embodiment: A product or method that contains the claimed invention.

Examination: Procedure before the U.S. Patent and Trademark Office whereby an Examiner reviews the filed patent application to determine if the claimed invention is patentable.

Infringement: Violation of a patent occurring when someone makes, uses, or sells a patented invention, without permission of the patent holder, within the United States during the term of the patent. Infringement may be direct, by inducement, or contributory. Direct infringement is making, using, or selling the patented invention without permission. Inducing infringement is intentionally causing another to directly infringe a patent. Contributory infringement is offering to sell or selling an item that is a significant part of the invention, so that the buyer directly infringes the patent. To be a contributory infringer, one must know that the part being offered or

sold is designed specifically for infringing the patented invention and is not a common object suitable for noninfringing uses.

Limitation: A required part of an invention set forth in a patent claim. A limitation is a requirement of the invention. The word “limitation” is often used interchangeably with the word “requirement.”

Patent: A patent is an exclusive right granted by the U.S. Patent and Trademark Office to an inventor to prevent others from making, using, or selling an invention for a term of 20 years from the date the patent application was filed (or 17 years from the date the patent issued). When the patent expires, the right to make, use, or sell the invention is dedicated to the public. The patent has three parts, which are a specification, drawings and claims. The patent is granted after examination by the U.S. Patent and Trademark Office of a patent application filed by the inventor which has these parts, and this examination is called the prosecution history.

Patent and Trademark Office (PTO): An administrative branch of the U.S. Department of Commerce that is charged with overseeing and implementing the federal laws of patents and trademarks. It is responsible for examining all patent applications and issuing all patents in the United States.

Prior Art: Previously known subject matter in the field of a claimed invention for which a patent is being sought. It includes issued patents, publications, and knowledge deemed to be publicly available, such as trade skills, trade practices, and the like.

Prosecution History: The prosecution history is the complete written record of the proceedings in the PTO from the initial application to the issued patent. The prosecution history includes the office actions taken by the PTO and the amendments to the patent application filed by the applicant during the examination process.

Reads On: A patent claim “reads on” a device or method when each required part (requirement) of the claim is found in the device or method.

Requirement: A required part or step of an invention set forth in a patent claim. The word “requirement” is often used interchangeably with the word “limitation.”

Royalty: A royalty is a payment made to the owner of a patent by a nonowner in exchange for rights to make, use, or sell the claimed invention.

Specification: The specification is a required part of a patent application and an issued patent. It is a written description of the invention and of the manner and process of making and using the claimed invention.